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ABSTRACTS

FIBERS A

NATURAL FIBERS A 1

MOISTURE REGAIN OF COTTON. S. P. Koltun, M. L. Nelson and J. N. Grant (Southern Regional Res. Lab.). Cotton Gin & Oil Mill Press 58: 26-27 (May 4, 1957). (2410)

When cotton is harvested by spindle pickers, wetting agents are sometimes used to keep the spindles clean and to reduce the amount of water required in picking. A study was made as to whether the presence of small amounts of wetting agent would affect the moisture regain of the lint cotton during its subsequent history. Within the limitations of the experimental conditions employed, it was concluded that the presence of small quantities of anionic wetting agents has a negligible effect on the moisture regain of cotton at both very high and very low relative humidities. Tables.

CHARACTERIZATION OF CELLULOSE DERIVATIVES BY MEANS OF THE X-RAY DIFFRACTOMETER. L. Segal and C. M. Conrad (Southern Regional Res. Lab.). Am. Dyestuff Reptr. 46: 637-642 (Aug. 26, 1957). (2411)

In studies on the improvement of the properties of cotton fibers, the x-ray diffractometer has been used both qualitatively and quantitatively in evaluating the effects on the fine structure of the fiber of various chemical and mechanical treatments. Information and examples are presented to illustrate the application of the diffractometer to such operations as measurement of crystallite orientation, qualitative detection of the transformation of cellulose from one crystal type to another, measurement of the extent of crystal transformation or chemical cellulose complexes, and determination of changes in degree of crystallinity of the cellulose in the fiber. Graphs. Photograph. 43 references.

EFFECT OF SUNLIGHT ON THE PROPERTIES OF COTTON S. Kadyrov. Tekstil. Prom. 16, No. 9: 14-16 (1956). In Russian. Through BCIRA 37: 121 (1957). (2412)

It is shown that the prolonged action of sunlight and atmospheric conditions have an adverse effect on the technological properties of cotton (tensile strength, staple length, quantity of linters, etc.). Experimentally, the polarization method does not reproduce the harmful action of sunlight on the tensile strength of the fiber. However, cotton, removed from the light after the first day of boll opening, has a higher strength and a higher degree of polymerization as compared with cotton exposed to sunlight under normal conditions.

SOME PHYSICO-MECHANICAL PROPERTIES OF COTTON. G. I. Miroshnichenko. Tekstil. Prom. 16, No. 9: 10-14 (1956). In Russian. Through BCIRA 37: 138 (1957). (2413)

Equations are given for determining the porosity and porosity coefficient, specific volume, compressibility, internal friction and cohesion, lateral pressure, and friction coefficient of cotton.

PHOTOPERIODICITY AND WOOL GROWTH IN ROMNEY RAMS AND WETHERS. A. B. Wildman (Wool Ind. Res. Assoc.). (Letter to the editor). Nature 180: 296-297 (Aug. 10, 1957). (2414)

SPONTANEOUS IGNITION OF WOOL. PART 1. THE CAUSES OF SPONTANEOUS FIRES IN NEW ZEALAND WOOL. I. K. Walker and H. M. Williamson. J. Appl. Chem. 7: 468-480 (Aug. 1957). (2415)

An investigation was made of the causes of heating and spontaneous ignition of baled wool in the New Zealand wool trade. It is shown that temperatures high enough to cause combustion could not be promoted solely by exothermic wetting, bacterial rotting, or by friction during "dumping." Direct reaction with oxygen at temperatures below 60° can cause temperature rises up to the ignition point in some samples of pie wool. Results of analyses of representative pie wools are presented. It is concluded that the majority of (and perhaps all) spontaneous fires in raw wool are caused by pie wool. Adequate scouring of the pie wool removes the combustion hazard. Graphs. Tables. 42 references.

MAN-MADE FIBERS A 2

MAN-MADE FIBER NOMENCLATURE. Textile Organon 28: 114-115, 118-119 (Aug. 1957). (2416)

This listing of the man-made fibers produced commercially in the world includes generic and trade names, as well as the principal forms in which the fibers are produced and sold. Acceptance of the term "man-made" is discussed.

MAN-MADE FIBERS: PROGRESS REVIEW AND OUTLOOK, 1957-1958. J. Campbell. Modern Textiles Mag. 38: 51-70 (Sept. 1957). (2417)

Data on the economic and technical progress of rayon, nylon, acetate, acrylics, polyesters, polyethylenes, metallics, glass fibers, etc.

MODERN TEXTILES MAGAZINE TABLES OF DENIER NUMBERS AND FILAMENT COUNTS OF U.S. MAN-MADE YARNS AND FIBERS. H. G. Janner. Modern Textiles Mag. 38: 71-80 (Sept. 1957). (2418)

These tables have been revised and brought up to date so as to present the most recent data on denier numbers and filament counts of man-made filament yarns and staple fibers manufactured in the United States. Addresses of yarn producer sales offices are also given.

TEXTILE WORLD'S 1957 MAN-MADE FIBER TABLE. W. A. B. Davidson. Textile World 107: 101-120 (Sept. 1957). (2419)

This 1957 revision of Textile World's 1955 synthetic fiber table includes up-to-date information on fiber properties and production. Reprints are available at $1.00 each for 1-15 copies, 75¢ for 16-30 copies, 60¢ for 31-99 copies, and 40¢ for 100 or more copies from Textile World, 330 W. 42 St., New York 36, N.Y.

METAL FIBERS MAKE SOLID SHAPES. Business Week No. 1460: 70, 72, 76 (Aug. 24, 1957). (2420)

A new process uses metal fibers instead of powder to make solid metal shapes with a range of unusual properties. Fibers can be matted together, in a process that resembles paper-making, and compacted for various qualities of strength, heat resistance, and porosity.

DYNAMIC MECHANICAL BEHAVIOR OF SOME NYLONS. A. E. Woodward, J. A. Sauer, C. W. Deeley and D. E. Kline (Pennsylvania State Univ.). J. Colloid Sci. 12: 363-377 (Aug. 1957). (2421)

The dynamic mechanical properties of 6-6 nylon, 6-10 nylon, and a nylon copolymer have been studied in the audio-frequency region over a temperature range extending from about 80° K to near the melting point by driving rodlike samples in their first transverse mode of oscillation. 25 references.

FLOXAN, A NEW WOOL-LIKE VISCOSE FIBER. W. Bandel (Spinnfaser AG, Kassel, Ger.). Tidsskr. Textiltek. 15: 89-91 (1957). In Danish. Through Chem. Abstracts 51: 12496 (1957). (2422)

Floxan, especially useful for tufted carpets, possesses high crimp, bulk resilience, good spinning properties, and, in blends, best possible dye affinity and low tendency to soiling. It compares favorably with highly crimped viscose, Diolen, Perlon, and wool.

YARN PRODUCTION B

TRICEL TRIESTER FIBER IN BLENDS WITH COTTON OR VISCOSE. Brit. Celanese Ltd. Textile Merc. 137: 97, 99 (July 19, 1957); 141-142 (July 26, 1957); 188-190 (Aug. 2, 1957); 223-224 (Aug. 9, 1957); 265-268 (Aug. 16, 1957). (2423)

Part 1. Opening, blending, and carding. Part 2. Drawing and spinning. Part 3. Processing, weaving, and knitting. Part 4. Dyeing methods and recommended dyestuffs. Part 5. Printing, finishing, and heat treatments.

PROCESSING ORLON ACRYLIC STAPLE ON THE WORSTED SYSTEM. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Aug. 1957. 10 p. Bull. OR-80. Free. (2424)

Blending, carding, gilling and combing, pin drafting and gill reducing, roving, spinning, and twist setting. Charts. Diagrams.

CRIMPED ARTIFICIAL FIBERS. O. Faust. Melliand Textilber. 37, No. 11: 1260-1261 (1956). In German. Through BCIRA 37: 36 (1957). (2425)

Crimping processes covered by German Patents 535 234 and 537 036 (in which swollen rubber-like fibers are crimped and impregnated with resins to increase the durability of the crimp) and by French Patent 1 076 599 (in which fibers are crimped in the molten state and set) are covered.

PRINCIPLES GOVERNING THE CONTROL OF FLOW OF MATERIAL IN A JUTE PROCESSING SYSTEM. J. N. Mather (Brit. Jute Trade Res. Assoc.). J. Textile Inst. 48: P482-P501 (Aug. 1957). (2426)

Conditions determining the most economical use of machines are derived, leading to an evaluation of the saving in number of machines, at different efficiency levels, as the draft is reduced. A flow analysis of systems recommended by machinery makers is performed, illustrating factors governing machine efficiencies. The system of a mill employing old machinery is analyzed. Although the text is concerned primarily with a jute processing system, the principles enumerated apply to any textile process. Formulas. Graphs.

WASTAGE IN JUTE MANUFACTURE. K. K. Chatterjee. Textile Mfr. 83: 388-390, 421 (Aug. 1957). (2427)

Results of detailed investigations into the causes of recent increases in card waste in the Indian jute industry. The effect of deterioration in quality of batch has been studied, as well as the effects of incorporating mesta in the batch. Comparative results of adding oil alone and oil and water emulsion are given. Tables.

CAN SPINNING. Textile Age 21: 9-10 (Aug. 1957). (2428)

The importance of the creel package, stock preparation, and drafting systems in can spinning are briefly discussed.

OPENING, PICKING, FIBER PREPARATION B 1

MODERNIZATION IN OPENING ROOMS IN TWO-ROLLER SPINNING MILLS. K. Müller. Z. ges. Textil-Ind. 58, No. 24: 941-943 (1956). In German. Through BCIRA 37: 67 (1957). (2429)

The performance of an opening machine (shaker) set consisting of hopper feeder and breaker card, and devices for effective dust removal in the workrooms are described.

TEMAFA CLEANING DEVICE FOR PNEUMATIC CONVEYOR SYSTEMS IN OPENING ROOMS. K. Müller. Melliand Textilber. 37, No. 11: 1269 (1956). In German. Through BCIRA 37: 36 (1957). (2430)

CARDING AND COMBING B 2

CONTROL OF CARDROOM DUST. Textile Merc. 137: 253-256 (Aug. 16, 1957); Textile Wkly. 57: 431-432 (Aug. 16, 1957). (2431)

The Shirley "pressure point" system of exhaust ventilation is recommended for use in cardrooms by the British Joint Advisory Committee of the Cotton Industry on Dust in Cardrooms. Principles of the system are discussed. Photographs.

INFLUENCE OF THE VELOCITY OF THE ROLLER CARD WORKER ON THE CARDING EFFECT. K. Grether. Textil-Praxis 11, No. 12: 1188-1192 (1956). In German. Through BCIRA 37: 97 (1957). (2432)

Referring to the carding theory by N. Ya Kanarskii and to experiments by Martindale on the distribution and movement of the wool on worsted and wool cards, the author shows that by increasing the worker velocity within practical limits the carding efficiency can be improved, resulting in a more uniform web, a somewhat greater yarn strength, and reduced breakages in spinning.

SURVEY OF THE POSSIBILITIES OF APPLYING PROCESS CONTROL TO THE WOOLEN CARD. G. H. Thorndike, R. T. D. Richards and P. D. Jowett. J. Textile Inst. 48: P502-P519 (Aug. 1957). (2433)

The paper is introduced by a short discussion on the irregularities present in the output of the woolen card. Based on experimental work done in connection with the WIRA/BEP Autocount, control loops at various places on the card are assessed, emphasizing practical aspects that may arise owing to the nature of the measuring and regulating units. The problem is treated in a manner similar to that adopted by other industries, and in this treatment it is necessary to introduce some aspects of process control analysis. Appendixes are added discussing this matter and one aspect of the movement of fibers through a card. Graphs. Tables. Diagrams. 34 references.

HOW DO YOU GRIND YOUR FLATS? Globe Review 2: 131-133 (1957). (2434)

Discussion of the comparative merits of the two basic ways of holding the flats during the grinding operation: from the working (or front) seating on which the flat normally travels over the bend, or from the grinding (or back) seating. Diagrams.

PRODUCTIVITY AT THE CARD: CONTINUOUS STRIPPING. Casablancas High Draft Co. Ltd. Textile Wkly. 57: 498-499 (Aug. 23, 1957). (2435)

The Constant Card continuous stripping device reduces stripping frequency to once or twice in a 45-hour week. The nep count is lower and the saving in cotton is higher. Photograph.

GRINDING CARD CLOTHING. P. J. M. van Gorp. Tex 15, No. 11: 1577-1584; No. 12: 1746-1751 (1956); 16, No. 1: 59-64 (1957). In Dutch. Through BCIRA 37: 97 (1957). (2436)

Purpose of grinding, grinding devices, and methods of grinding are reviewed.

MANUFACTURE OF CARD CLOTHING. Globe Review 2: 125-130 (1957). (2437)

Steps in the manufacture of card clothing at the English Card Clothing Co. Ltd. are described and illustrated. Photographs.

EVERCLEANERS. P. Miranda. Indian Textile J. 67: 620, 619 (July 1957). (2438)

The Evercleaner for the continuous suction cleaning of cards is described. Diagram.

NEW TECHNIQUE FOR INCREASING THE OPENING POWER OF CARDS. T. W. G. Ashdown and P. P. Townend (Leeds Univ.). Textile Mfr. 83: 402-405 (Aug. 1957). (2439)

A discussion of results from experiments carried out to establish the best place for the fancy in order to ensure maximum carding efficiency from any swift on a woolen or worsted card. Diagrams. Photographs.

CARDING PERLON STAPLE. H. Schiedewitz. Textil- u. Faserstofftech. 6, No. 10: 443-445 (1956). In German. Through BCIRA 37: 36 (1957). (2440)

The use of suitable dressing agents and their effect on staple color, the effect of spinning preparations on subsequent dyeings, and the use of antistatic agents are discussed.

LARGE CANS IMPROVE EFFICIENCY. Globe Review 2: 122-123 (1957). (2441)

New coilers accommodating 14 and 16 inch cans increase output, reduce waste, and improve sliver regularity. The larger diameter cans may be fitted to existing cards and drawing frames. Photographs. Table.

TWO-CAN COILER. Globe Review 2: 117-121 (1957). (2442)

Controlled production at the card is now possible by means of a measuring motion incorporated in the new type coiler without the necessity for stopping the machine. This coiler also acts as an effective waste preventer. Photographs. Diagrams.

WORK IMPROVEMENT ON COMBERS. I. F. Trompeter. Tekstil. Prom. 16, No. 9: 57-58 (1956). In Russian. Through BCIRA 37: 125 (1957). (2443)

To improve the work of combers, several alterations were introduced, of which the following were the most effective: increase of the draft between detaching and feed rollers, use of flat in place of round needles on the set of combing rollers, and use of two-roller instead of four-roller drafting devices.

DRAWING AND ROVING B 3

MODERN WORSTED SPINNING PRACTICE. PART 4. FRENCH DRAWING. N. Roper. Textile Mfr. 83: 397-399 (Aug. 1957). (2444)

The French drawing process is described and illustrated. Diagrams. Photographs.

TOP ROLL COVERS. P. Duvivier. Industrie Textile: 77-78 (Nov. 1956). In French. Through BCIRA 37: 126 (1957). (2445)

An elastic covering for the top rollers of draw-frames (called Stiko) is described, which prevents slippage of the fiber tuft, controls parallelization and cohesion of the fibers, conveys and guides the floating fibers and, owing to perfect gripping properties, makes it possible to increase productivity of the draw-frame and the quality of the product. Reference is also made to another top-roll covering constructed on similar principles (known under the name of Laben).

NEW DRAFTING ELEMENT. Cole Engineering Co. Textile Bull. 83: 69-72 (Aug. 1957). (2446)

The outstanding features of the Cole Engineering Company's Rusco top roll include: straight rigid shaft, independently revolving cots, shaft bearings capable of withstanding excessive loads, grease sealed in and lint sealed out, self-contained unit which never needs disassembling, and cots which are simple to buff with complete accuracy. Results with the new drafting element at the Russell Mfg. Co. are reported. Photographs.

SPINNING, WINDING, TWISTING B 4

POWER REQUIREMENTS IN RING SPINNING. H. Catling and A. E. De Barr (Shirley Inst.). Shirley Inst. Mem. 30: 101-126 (June 1957). (2447)

The cost of the power consumed by the spinning frame is the principal increased cost to be set against the reduced handling costs obtainable with large packages, and accurate information as to the power requirements of any new or modified ring frame is necessary in spinning room planning. A study has been made of the various processes by which power is consumed in ring spinning. There are six separately measurable components of ring frame power and each of these has been determined, or an empirical rule for its estimation evolved, over a wide range of spinning conditions and package sizes. The results are presented in such a way that the components of total power may be obtained for almost any conceivable ring frame. For ring frames of orthodox design, tables of total power are given covering a wide range of counts, speeds, and package sizes.

SCIENTIST LOOKS AT THE WOOL INDUSTRY: WOOLEN RING FRAME SPINNING. G. H. Thorndike. Wool Sci. Rev. No. 17: 3-15 (July 1957). (2448)

The drafting zone and the spinning zone of the wool ring spinning frame are considered, as well as tests on frame-spun yarns. Photographs. Diagrams. Graphs. 9 references.

HOW 11 MILLS BREAK IN NEW SPINNING RINGS. Textile World 107: 151, 212, 214 (Sept. 1957). (2449)

NYLON TRAVELERS FOR TWISTING. Textile Wkly. 57: 303-304, 307, 309 (Aug. 2, 1957). (2450)

The advantages of nylon travelers with respect to life, production, ring wear, lubrication, yarn tension, breakage rate, ballooning, safety, etc., are outlined, operating conditions are discussed, and sizes available are tabulated. Graphs. Diagram. Photograph. Tables.

INDIVIDUAL ELECTRIC DRIVES FOR SPEED FRAMES. O. R. Steffen. Brown Boveri Rev. 43, No. 5: 153-155 (1956). Through BCIRA 37: 13 (1957). (2451)

Problems associated with the application of electric drives to spinning frames are outlined, and the Brown Boveri system of individual electric drives is described.

PROGRESS IN STAPLE SPINNING. G. Waggett. Textile Wkly. 57: 500, 502 (Aug. 23, 1957). (2452)

A brief review of recent changes in staple spinning machinery and techniques. The biggest change is the development of machinery for pile yarn for the tufted carpet industry.

PRODUCTION OF PLAIN FOLDED YARNS. G. Mehnert. Melliand Textilber. 37, No. 11: 1265-1267 (1956). In German. Through BCIRA 37: 37 (1957). (2453)

Twist directions, rings and travelers, twisting technique, and determination of twist for the Hamel ring-doubling machine, model 2/110.

SPIRAL AND GIMP YARNS. Wool Record 92: 31, 33 (July 25, 1957). (2454)

Details of the composition and ring twisting of wool spiral and gimp yarns are given.

ARUNCORDER MACHINE. Arundel, Coulthard & Co. Ltd. Textile Merc. 137: 235-236 (Aug. 9, 1957); Textile Wkly. 57: 367-368 (Aug. 9, 1957). (2455)

Features of the Aruncorder, a combined twisting and cabling machine designed to produce tire cord and cabled yarns in a single operation, are described. Photographs.

CRIMPED SYNTHETIC FIBER YARNS. Ernest Scragg & Sons Ltd. Textile Merc. 137: 263-264, 278 (Aug. 16, 1957); Textile Wkly. 57: 434-435 (Aug. 16, 1957). (2456)

The CrimpSpin 3, a new 240 spindle machine with new twin heater unit for the production of crimped synthetic fiber yarn, is described and illustrated.

ELECTRONIC SLUBCATCHERS ON WINDING MACHINES. H. W. Schneider. J. Textile Inst. 48: P542-P547 (Aug. 1957). (2457)

The paper describes a patented device for an electronic yarn clearer. Diagrams. 13 references.

YARNS B 5

SIMPLIFIED SPINNING OF TEXTURED YARNS. Bull. Inst. Textile France No. 62: 93-103 (1956). In French. Through BCIRA 37: 69 (1957). (2458)

Process for the production of bulked, stretch, and twisted yarns (direct spinning, crimping) are reviewed, and the characteristics of the yarns (Taslan, Ban-lon, Agilon, Helanca, Nefalon, Synfoam, Stretch core, Flufion, Flexcel, Nyacry, Chadalon, and Shape 2U, and Delwin) are described.

POINTERS ON SPINNING NOVELTY YARNS. G. B. Peeler. Textile World 107: 132, 133, 210, 212 (Sept. 1957). (2459)

Many novelty yarns can be made at the spinning frame with only minor mechanical changes. Some tips are given for spinning mock-twist yarn, core yarn, blended-stock yarn, and combination-spun stretch yarn. Diagrams.

NEW FIBERS IN TIRE CORDS. G. D. Mallory (Goodyear Tire & Rubber Co.). Textile Research J. 27: 662-664 (Aug. 1957). (2460)

Cotton, rayon, nylon, and steel have all been used to make satisfactory tires. These four fibers vary widely in appearance and characteristics, but have been used successfully in spite of differences where other fibers were inadequate. The most critical factors are cost per pound per unit of strength as built in the tire and fatigue life for reversing loads at operational temperatures. New fibers should have enough of the basic requirements, a feature quality for some needed and spectacular performance, and a low enough price.

YARN CONTRACTION DUE TO TWIST. W. E. Morton and J. W. S. Hearle (Univ. of Manchester). (Letter to the editor). J. Textile Inst. 48: T159-T162 (May 1957). (2461)

TRANSVERSE VIBRATIONS IN WORSTED AND WOOLEN YARNS. K. Baird (Wool Ind. Res. Assoc.). J. Textile Inst. 48: T154-T158 (May 1957). (2462)

A description is given of a simple apparatus used for producing standing waves of transverse vibrations in worsted and woolen yarns. With moderate tension applied, the behavior of yarns can be predicted by the classical formula for resonance of transverse vibrations in strings. In the four worsted and four woolen yarns investigated, changing the twist had no effect on the resonant frequencies. A method is suggested for measuring the tension in staple yarns in textile machines, particularly the woolen mule, by the standing-wave method. Graphs. 17 references.

FACTORS AFFECTING THE HAIRINESS OF WORSTED YARNS. H. R. Boswell and P. P. Townend (Leeds Univ.). J. Textile Inst. 48: T135-T142 (May 1957). (2463)

Hairiness in yarns generally arises in the spinning process. If it is excessive it will give rise to considerable difficulties in the processes through which the yarn must subsequently pass. This paper is an attempt to assess the contributions of some of the factors which affect this phenomenon. 3 references.

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

HOW TO EVALUATE SLASHER DRYING CAPACITY. Textile World 107: 146, 214 (Sept. 1957). (2464)

A close estimate can be made of normal drying capacities for average sets. With these average figures established, estimates can then be made for any standard set. Table of slasher drying rates.

CLEANING BOBBINS FROM AUTOMATIC RESHUTTLING LOOMS. H. B. Hess. Textil-Praxis 11, No. 12: 1211-1212 (1956). In German. Through BCIRA 37: 100 (1957). (2465)

Construction details and mechanism of the new bobbin stripping machine, AZM-Z model (developed by Georg Fischer A.G., Schaffhausen) are described. The stripping efficiency is 99% at a full capacity of 6,000 bobbins per hour. The stripped yarn residues are removed by suction into a container, eliminating blocking. The machine is constructed for bobbin ring diameters of 24, 27, and 30 mm, with 3 or 4 rings, and for bobbin lengths of 172-240 mm.

PROTEIN SIZE REMOVAL AND RESIDUE DETECTION. H. Moroff. Melliand Textilber. 37, No. 11: 1304-1308 (1956). In German. Through BCIRA 37: 40 (1957). (2466)

Size removal by water and by enzymatic or chemical desizing are compared, and it is shown that protein sizes cannot be completely removed by washing yarns or fabrics which have been treated at high temperatures or singed. Methods for detecting protein sizes and residues are critically examined and a new method is described.

EVALUATION OF CHINA-CLAYS FOR COTTON SIZING. P. C. Mehta. Indian Textile J. 67: 548-552 (June 1957). (2467)

Four samples of china clay were evaluated as a cotton size on the experimental Callaway slasher. Data on the analysis of the samples, characteristics of the sized yarns, retention of china clay after weaving, and warp breakages during weaving are included. Tables.

SIZING SYNTHETIC FIBER YARNS. L. Meier. Textil-Praxis 11, No. 12: 1207-1209 (1956). In German. Through BCIRA 37: 100 (1957). (2468)

Difficulties encountered in sizing warps from synthetic staple fibers and properties required from satisfactory sizing agents are discussed. Reference is made to the development of a new sizing agent, Molvenin 366. It is available in powder-form and may be used alone or together with potato starch. The sized warps show increased abrasion resistance as compared with untreated yarn and are neither stiff nor brittle.

TECHNIQUE AND COST CALCULATION OF YARN SIZING. G. Galassi. Riv. Tess. Aracne 11, No. 9: 907-910; No. 10: 1029-1033 (1956). In Italian. Through BCIRA 36: 38 (1957). (2469)

Categories of sizes and the substances of which they are composed, the percentage and limit of size deposit, methods of size preparation, and sizing cost calculation in relation to fabric cost are described.

WARP TENSION CONTROL IN SIZING. A. Wiedemeier and O. Kolb. Brown Boveri Rev. 43, No. 7: 260-265 (1956). Through BCIRA 37: 15 (1957). (2470)

Two units of a multi-motor, coordinated-speed drive, with automatic speed regulation by 4 magnetic amplifiers, are employed to drive the winder of a sizing machine. Warp tension is maintained constant as the sized beam is built up. The principles of the system are described.

WARPING, CREELING, DYEING. Benninger Engineering Co. Ltd. Textile Wkly. 57: 370-374 (Aug. 9, 1957). (2471)

Features of the Benninger sectional cone warper model ZASe, thread tension device for warping creel model GRZa, and Fibe 4-bowl pad dyeing machine model CEA are described. Photographs. Diagrams.

CLEANLINESS IN TEXTILE MILLS. J. White. Textile Mfr. 83: 381-386 (Aug. 1957). (2472)

After considering cleanliness in relation to warping methods, yarn packages, warping reeds, swifts, beaming, transport, sizing, wrapping, etc., the author discusses some possible sources of yarn soilage in transport, handling, and creeling operations. Diagrams. Photographs.

PREPARATION OF WARPING ROLLERS FOR COLORED WEAVING. G. Mahrle. Textil-Praxis 11, No. 12: 1212-1213 (1956). In German. Through BCIRA 37: 100 (1957). (2473)

The system described is claimed to be an effective abridgement of the time-consuming and laborious determination of the order of warp threads and to have proved satisfactory in practice.

MILL TEST PROCEDURES. PART 9. TESTS FOR BETTER WARPING, SLASHING. N. L. Enrick. Modern Textiles Mag. 38: 100-104, 108, 113 (Sept. 1957). (2474)

Presents the following test procedures: warper check, slasher size content, slasher size analysis, and slasher stretch. Methods of combining quality tests with tests of end-breaks are shown, and the effects of slashing on weaving performance are discussed. Illustrative worksheet forms demonstrate the details of administrative recording and summary of the results of warping and slashing quality control.

WEAVING C 2

WEFT STOP MOTION FOR LOOSE WEFT THREADS. A. Damet. Industrie Textile: 883-885 (Dec. 1956). In French. Through BCIRA 37: 129 (1957). (2475)

The mechanism of the weft stop motion described is characterized in that the point of the oscillating weft feeler enters between two adjacent warp threads before the new weft thread is inserted and, supported at its free end against the last woven weft thread, when leaving the fabric is caused to rotate about its axis by the resistance of the new weft thread when beaten up. If no new weft thread is inserted or if it breaks, this resistance and, consequently, rotation of the feeler are absent, causing the driving motor to stop by closing the solenoid circuit.

SPECIAL LOOMS. W. T. Swatek. Melliand Textilber. 37, No. 11: 1281-1284 (1956). In German. Through BCIRA 37: 38 (1957). (2476)

Constructional details of the Picanol loom (CC type for cotton cloth and CM type for heavy materials), the Saurer automatic terry loom, which can be fitted with a dobby or Jacquard machine, and the Jaeggli Universal silk loom.

PRACTICAL CALCULATION OF THE DIMENSIONS OF SHUTTLE AND SHED OPENING. H. Duquesne. Industrie Textile: 791-792 (Nov. 1956). In French. Through BCIRA 37: 128 (1957). (2477)

Examples are given for calculating the area of the shed opening and the volume of weft pirns for rectangular and trapezoidal shuttles, respectively. It is seen that by increasing the dimensions of the shuttle by 5 mm (trapezoidal shuttle), a better adaptation to the shape of the shed and an increased capacity of the pirn (from 83 cm^3 to 140 cm^3) are obtained.

KINEMATIC STUDY OF THE SHUTTLE TRAJECTORY. H. Duquesne. Industrie Textile: 739-744 (Oct. 1956). In French. Through BCIRA 37: 71 (1957). (2478)

Ultra-rapid cinematography was applied to study the mechanisms of the lay, box swell, stopping, and starting motions, shock absorber for the shuttle entering into the box, etc. The apparatus and methods, and experimental conditions are described and results are discussed.

HOW TO MAKE GOOD SHUTTLES AND INSPECT THEM. K. H. Shah. Indian Textile J. 67: 622-624, 621 (July 1957). (2479)

A survey of shuttle development, manufacture, inspection, types, use in weaving, etc.

REED: SETTING AND CALCULATION. J. Meis. Z. ges. Textil-Ind. 59, No. 1: 8-11 (1957). In German. Through BCIRA 37: 128 (1957). (2480)

Examples are given for calculating the reed width, and correct reed position is discussed. Brief reference is made to special constructions.

HARNESS CORDS: JACQUARD LOOM. M. Kappel. Melliand Textilber. 37, No. 12: 1394-1399 (1956). In German. Through BCIRA 37: 101 (1957). (2481)

Raw materials, structure, preparation, serviceability, capacity, and physical and technological properties of harness cords are described, with reference to tensile strength and abrasion resistance tests, maintenance and care, factors affecting wear, use on high-speed jacquard looms, and suitability of synthetic fibers.

COIR AND SISAL HEAVY DUTY LOOMS. Wilson & Longbottom Ltd. Textile Merc. 137: 154-156 (July 26, 1957). (2482)

Features of the new range of Wilson & Longbottom looms for matting up to 12 feet wide. Photographs.

CONVERSION OF A PLAIN LOOM INTO A TERRY LOOM. Textil-Praxis 11, No. 12: 1209-1210 (1956). In German. (2483)

REINSHAGEN JACQUARD RIBBON LOOM. H. Rittinghaus. Textil-Praxis 11, No. 11: 1097-1100 (1956). In German. Through BCIRA 37: 38 (1957). (2484)

The new loom is characterized by high side frames and a pendulum-like movement of the lay.

TEST YOUR OWN LOOM PARTS FOR LOW COST AND EFFICIENCY. W. C. Westbrook. Textile World 107: 153, 240 (Sept. 1957). (2485)

The cheapest first cost of loom parts does not necessarily mean the lowest operating cost. Mill tests may reveal unexpected discrepancies.

A STUDY IN LOOM FIXING. PART 14. F. D. Herring. Textile Bull. 83: 73-76 (Aug. 1957). (2486)

The selection and training of the loom fixer are discussed.

KINEMATIC ANALYSIS OF LAY AND SHUTTLE MOVEMENTS. J. Schneider. Melliand Textilber. 37, No. 10: 1161-1166; No. 11: 1277-1280; No. 12: 1391-1393 (1956). In German. Through BCIRA 37: 71 (1957). (2487)

A new, relatively simple method is described for accurately investigating the kinematics of lay and shuttle motions prior to loom construction.

MODERN NARROW FABRIC LOOMS. A. Thompson. Man-Made Textiles 34: 64-65 (Aug. 1957). (2488)

Features of the Texnovo, Saurer 60 BG, Sitam, Comet, Libby, and Rotor automatic ribbon looms are briefly described. Photographs.

ONE MILLION PICKS IN 80 HOURS. Henry Livesey Ltd. Textile Wkly. 57: 455-457 (Aug. 16, 1957). (2489)

The Livesey AX high speed automatic loom is described. To overcome some of the difficulties associated with high speed weaving, the makers have developed and incorporated an inertia checking device and a swell release mechanism.

EFFECT OF LOOM SETTING AND FABRIC DESIGN ON GAUZE CURTAIN QUALITY. M. Richter. Textil- u. Faserstofftech. 6, No. 11: 493-496 (1956). In German. Through BCIRA 37: 71 (1957). (2490)

Preparatory weaving work (testing of the warp and weft materials as regards their suitability for curtaining) and problems of shed setting are discussed, and directions given for obtaining satisfactory designs on gauze curtain cloth.

KNITTING C 3

JACQUARD EFFECTS IN STITCH. J. B. Lancashire. Hosiery Trade J. 64: 58-60 (Aug. 1957). (2491)

Jacquard effects produced by combining knitting and tucking, or knitting and missing, or knitting, tucking, and missing, are described. Photographs.

HOW TO LOOK AFTER TRICOT PRESSER, GUIDE, AND NEEDLE BARS. J. A. Wertman. Textile World 107: 149, 210 (Sept. 1957). (2492)

Tips on filing presser bars, changing needles, and removing guide bars.

FRENCH SINKER-WHEEL MACHINE: CURRENT USES AND DEVELOPMENTS. J. Rab. Hosiery Trade J. 64: 72, 75-77, 94 (Aug. 1957). (2493)

The unique qualities of sinker-wheel constructed fabrics, the reasons for the decline of sinker wheel installations, and recent developments in these machines are discussed. Photographs.

FABRICS C 4

KOLORBON: SOLUTION-DYED CARPET RAYON. Hartford Rayon Co. Am. Textile Reptr. 71: 51-57, 79 (Aug. 15, 1957). (2494)

The characteristics of Kolorbon are discussed. Recommendations for equipment and processing are included. Photographs.

WOVEN, TUFTED, AND KNITTED RUGS. W. E. Shinn. Knitter 21: 31-38 (Aug. 1957). (2495)

Following a description of the structure and preparation of Brussels, Wilton, tapestry, velvet, chenille, Axminster, and machine tufted rugs, the use of the Karl Lieberknecht raschel knitter for producing warp knitted rugs is explained. Diagrams. Photographs.

SERVICEABILITY OF OUTER GARMENTS. F. Bolland. Textil- u. Faserstofftech. 6, No. 10: 435-441 (1956). In German. Through BCIRA 37: 52 (1957). (2496)

Factors affecting wear properties of outer garments are reviewed.

TWISTLESS TERYLENE FOR COATED FABRICS. Man-Made Textiles 34: 47 (Aug. 1957). (2497)

Coated Terylene fabrics are now being produced with a very much higher tear strength than before. This has been effected by weaving the base fabric from twistless Terylene yarn. The yarns bunch or group together to take the strain when subjected to stress.

CLOTH TERMS AND PARTICULARS: COTTON FABRICS, MATT AND RIB WEAVES. W. Middlebrook. Textile Mfr. 83: 400-401 (Aug. 1957). (2498)

Names, constructional particulars, i.e., ends, picks and counts, and the uses of cloths featuring matt weaves as well as ribbed cotton fabrics and cords, etc. Point diagrams.

SYNTHETICS FIBER PAPER END USES. Am. Textile Reptr. 71: 9, 33-36 (Aug. 22, 1957). (2499)

Industrial end uses with considerable promise include electrical insulation, backings for coated fabrics, map and chart paper, filters, light-duty tarpaulins, substitutes for multi-wall bags, and felt-like structures for low and high-pressure laminate reinforcing bats. Apparel and home furnishings markets also suggest potential end uses like rug backings, draperies, skirts, auto panels and headliners, and shoe fabrics. Properties of the new papers are discussed.

WOVEN FABRIC STRUCTURE: GRECIAN WEAVES, PATTERN AND TEXTURE WITH DIAMONDS AND DICING. D. C. Snowden. Man-Made Textiles 34: 42 (Aug. 1957). (2500)

·DESIGN IN WOVEN STRUCTURE. PART 56. FIGURED DESIGNS IN SMALL-FLOAT TWILLS. D. C. Snowden. Wool Rev. 31: 33, 35 (Aug. 1957). (2501)

PATTERNING PRINCIPLES IN WEFT KNITTING: THE TUCK STITCH. PART 1. BASIC CONSTRUCTIONS. PART 2. FANCY CONSTRUCTIONS. J. Rab. Man-Made Textiles 34: 47 (July 1957); 46 (Aug. 1957). (2502)

PHYSICAL PROPERTIES OF WOOL FIBERS: THERMAL PROPERTIES OF FIBERS AND FABRICS. G. King (Wool Industries Res. Assoc.). Wool Sci. Rev. No. 17: 33-49 (July 1957). (2503)

Factors controlling the warmth of clothing are analyzed, including thermal conductivity, thermal emissivity, and air permeability. Vapor permeability and recent work on the effect of wettability on fabric insulation under cold wet conditions are also discussed. Graphs. Diagrams. Tables. 19 references.

FIBERS AND EQUIPMENT USED IN THE MANUFACTURE OF NONWOVEN FABRICS. W. E. Brennan (Am. Viscose Corp.). Am. Dyestuff Reptr. 46: P583-P584, P600 (Aug. 12, 1957). (2504)

Fibers, equipment, bonding methods, and end-uses are briefly reviewed.

STUDY OF THE EFFECTS OF CHEMICALS ON THE PROPERTIES OF PARACHUTE FABRICS. D. M. Cates (N. C. State Coll., School of Textiles). Wright Air Development Center, Wright-Patterson Air Force Base, Ohio. Nov. 1956. 23 p. WADC tech. report 55-340, suppl. 1. (2505)

This report is a statistical analysis of data reported in WADC technical report 55-340 (see TTD abstr. 706) on the loss in strength of Dacron and nylon parachute fabrics treated with chemicals under various conditions.

SHRINK-RESIST PROCESSES FOR WOOL. PART 1. THE FACTORS THAT AFFECT FELTING SHRINKAGE. Wool Sci. Rev. No. 17: 16-32 (July 1957). (2506)

Factors affecting felting shrinkage are considered under the headings: the mechanism of felting, the effect of fiber properties in felting, the effect of yarn structure and the effect of fabric structure on felting, and the influence of knitting structure on relaxation shrinkage. Photomicrographs. Graphs. Tables. 15 references.

FINISHING AND CHEMICAL PROCESSING D

FINISHING LACE OF DU PONT NYLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Aug. 1957. 2 p. Bull. N-99. Free. (2507)

Procedures for scouring, dyeing, bleaching, heat-setting, and finishing.

SOLVING DIFFICULT DYEING AND FINISHING PROBLEMS. Am. Textile Reptr. 71: 25-26, 34 (Aug. 15, 1957). (2508)

Dyers and finishers with problems are advised to tell their troubles to the chemical and dye firms with whom they do business. These companies, maintaining the most efficient and extensive laboratories in the country, are willing to tackle new problems and pass along the solutions. Some recent technical problems in dyeing and finishing and how chemical company technicians solved them are included as examples.

DYEING AND FINISHING FABRICS OF BLENDS OF COTTON AND NYLON. Dyes & Chemicals Tech. Bull. 13: 133-142 (Sept. 1957). (2509)

Fabrics from intimate blends of cotton and nylon where the nylon component is present at the level of 25% or less are processed by the same methods used commercially for 100% cotton fabrics. In other cellulosic fabrics containing a high percentage of filament nylon, or in fabrics where nylon comprises a large part of the face of the fabric, the dyeing and finishing procedures are somewhat different. These procedures are described in this paper.

NEW FABRIC FINISHES PRODUCED BY SHRINKAGE TREATMENTS. B. C. M. Dorset. Textile Mfr. 83: 410-414 (Aug. 1957). (2510)

Developments now taking place allow compressive shrinkage treatments to yield new fabric finishes. In some cases these involve modification of the usual type of machine in conjunction with some of the newer chemical finishing methods. The author discusses the essential features of some of these new finishes. Diagrams.

HOW TO FINISH DACRON-COTTON BLENDS. R. L. Hunter, C. W. Holweger, Jr. and R. E. Ritter (E. I. du Pont de Nemours & Co.). Modern Textiles Mag. 38: 82-92, 96 (Sept. 1957). (2511)

CHEMICAL PROCESSES D 1

AROMATICS IN TEXTILES. Dodge & Olcott, Inc. Am. Textile Reptr. 71: 49-50, 86 (Aug. 15, 1957) (2512)

The application of perfumes for masking unpleasant processing odors or scenting wearing apparel to increase merchandising appeal is discussed. Examples are cited.

NEW FINISHES. P. A. Holt. Textile Mfr. 83: 417, 418 (Aug. 1957). (2513)

A general report on the range of recent finishes.

PHYSICOCHEMICAL FACTORS IN TEXTILE FINISHING. E. Elöd. Melliand Textilber. 37, No. 12: 1448-1452 (1956). In German. Through BCIRA 37: 104 (1957). (2514)

Problems associated with the effect of swelling on fiber properties, reactivity of protein (wool, silk) and polyamide fibers, hydrophobic properties, dye-acid anions and their effect on dye absorption, and hardening of aminoplasts in moist state during creaseproofing of cellulose hydrate fibers are discussed reviewing the relevant literature. 12 references.

FINISHING PERLON AND NYLON HOSIERY. W. Ernst. Textil-Praxis 11, No. 11: 1132-1134 (1956). In German. Through BCIRA 37: 45 (1957). (2515)

The wash-and-wear-resistant Cristallon finish (Textilwerk Max Foerster KG) is claimed to produce silky gloss, reduce transparency and snag formation, and preserve air-permeability.

FINISHES FOR MAN-MADE FIBERS. P. A. Holt (Bradford Dyers Assoc.). Dyer 118: 183-186 (Aug. 2, 1957). (2516)

Brief survey covering the various finishes available, processes involved, effects on fabric properties, and the problems involved in dyeing and finishing blends.

ASTON DURABLE ANTISTATIC FINISH. Onyx Oil & Chemical Co. Am. Textile Reptr. 71: 27, 29, 113-114 (Aug. 15, 1957). (2517)

Astons LT and 108 are applied to the fabric from an aqueous solution in combination with a curing agent, which cross links and makes the finish insoluble. Recommendations for the application of the Astons on various man-made fibers are tabulated, and the characteristics of Astonized fabrics are outlined.

DUNGLER DESIZING, KIERING, AND BLEACHING. J. Dungler. Melliand Textilber. 37, No. 11: 1312-1316 (1956). In German. Through BCIRA 37: 40 (1957). (2518)

The installation utilizes superheated steam in dynamic state, and is designed for treating light and medium-weight cotton fabrics at 80-100 m. per minute.

J-BOX PROCESSING IN COTTON PIECE GOODS BLEACHING. Textile Mfr. 83: 391-395 (Aug. 1957). (2519)

A review of various methods for using J-boxes in cotton processing. Diagrams. Photographs. 7 references.

BLEACHING NYLON. W. S. Willson. Skinner's Silk & Rayon Record 31: 837-839 (Aug. 1957). (2520)

Techniques for bleaching nylon with sodium chlorite and peracetic acid are briefly described.

BACKSIZING OF CARPETS. H. R. Crone. J. Textile Inst. 48: P404-P415 (July 1957). (2521)

A review of methods in use in Great Britain. Graphs.

FIRE-RESISTANT TREATMENT OF COTTON USING PHOSPHORYLAMIDE. M. L. Nielsen (Monsanto Chem. Co.). Textile Research J. 27: 603-610 (Aug. 1957). (2522)

Phosphorylamide, a water-soluble phosphorus-nitrogen compound, was cured on cotton cloth to impart washfast fire resistance. Some loss in strength, particularly tear strength, resulted, part of which could be alleviated by use of a softener. Apparently a considerable part of the nitrogen is present as imido (--NH--) nitrogen. 42 references.

IMPROVED PROCESS FOR COTTON DECRYSTALLIZATION. H. J. Janssen, C. H. Haydel, J. F. Seal and H. L. E. Vix (Southern Regional Res. Lab.). Textile Research J. 27: 622-625 (Aug. 1957). (2523)

Ice cold water was employed on both laboratory and pilot plant scales to extract residual monoethylamine reagent from decrystallized cotton materials. The use of cold water retained the high degree of decrystallization achieved and further retained the cellulose I crystal lattice of native cotton in the remaining crystalline regions. Advantages of this cold water extraction process compared with use of organic solvents are enumerated. 8 references.

COMPARISON OF WRINKLE-RESISTANT FINISHES FOR COTTON. T. F. Cooke, P. B. Roth, J. M. Salsbury, G. Switlyk and W. J. Van Loo (Am. Cyanamid Co.). Am. Dyestuff Reptr. 46: P585-P600 (Aug. 12, 1957). (2524)

The results of an extensive study of the application of urea, modified urea (ethylene urea), melamine and modified melamine-formaldehyde resins using ammonium, alkanol amine, and metallic inorganic salt accelerators to cotton fabric are presented. The effect of resin concentration, curing temperature, and time on the wrinkle recovery, tensile strength, tear strength, and discoloration of the treated fabric before and after washing is discussed. These data should enable a cotton-fabric finisher to select the optimum resins and conditions of application to obtain the wrinkle-resistant finish best suited for the specific fabric properties desired. Tables. Graphs. 9 references.

SILANE FINISHES FOR FIBROUS GLASS. M. H. Jellinek and N. D. Hanson. Modern Plastics 35: 178-182, 274-275 (Sept. 1957). (2525)

EFFECT OF DIFFERENT WASH METHODS ON BLEACHED LINEN GOODS. B. Abildstrom and T. Sorensen. Tidsskr. Textiltek. 14: 205-206 (1956). In Danish. Through Chem. Abstracts 51: 12497 (1957). (2526)

Wash tests on linen goods with 3 different wash liquors with a low calcined soda content, a high calcined soda content, and perborate, respectively, as bleaching agents showed clearly that the latter cause chemical disintegration of the linens examined.

ABSORPTION OF WATER BY AND DRYING OF UNTREATED, LAUNDERED, AND USED AND LAUNDERED COTTON AND LINEN TOWELING. F. E. Petzel (Oregon State Coll.). Am. Dyestuff Reptr. 46: 569-574, 576 (Aug. 12, 1957). (2527)

Results of an investigation on absorption of water by and the drying of plain weave cotton and linen toweling as affected by 20, 40, and 60 cycles of laundering only and of use and laundering are presented. After repeated launderings, cotton toweling decreased relatively little in breaking strength and took up moisture more readily than linen toweling during the early part of the absorption period. However, when the toweling absorbed water to a point approaching saturation, linen toweling took up more moisture than cotton. Linen toweling decreased more in breaking strength than cotton as a result of laundering and use. Tables. Graphs. 15 references.

CATALYTIC DAMAGE SUFFERED BY FIBERS DURING WASHING. W. Schönberger. Congr. mondial detergence et prods. tensioactifs, I[e] Congr. Paris 2, Sect. 5-11: 462-470 (1954). Summary in Chem. Abstracts 51: 12496 (1957). (2528)

A study was made of the damage suffered by cotton and staple viscose rayon colored with Cu-, Cr-, or Co-containing dyes, when they are washed in the presence of an oxidizing bleach.

RESIN "DECAY" RUINING TEXTILE SALES IN AIR-CONDITIONED STORES. Am. Textile Reptr. 71: 59-61, 82 (Aug. 15, 1957). (2529)

The problem of the liberation of formaldehyde fumes from resin finished fabrics can be eliminated by proper washing and neutralization during finishing. This is a general, industry-wide problem in which the finishing mills are hurting the retail store sales.

PHYSICAL PROPERTIES OF CHEMICALLY MODIFIED COTTONS. PART 3. EFFECTS OF MERCERIZATION. A. W. McDonald, R. S. Orr, G. C. Humphreys and J. N. Grant (Southern Regional Res. Lab., New Orleans La.). Textile Research J. 27: 641-648 (Aug. 1957). (2530)

Yarns from six cottons selected for their widely different inherent fiber characteristics were mercerized (1) under sufficient tension to maintain their original length, and (2) while permitted to contract freely. Fibers were removed from the yarns and were subjected to certain physical measurements. Moisture regain, cellulose density, linear density, breaking load, and elongation at break were measured on either or both fibers and yarns. Samples of the different cottons were found to differ in their response to the treatment. Those samples with a low value in a property generally displayed the greatest per cent change in that property. Large differences in the properties of the fibers and yarns were associated with the condition of mercerization whether at constant length or slack. Mercerization tended to equalize differences between the properties of fibers in a sample as well as between those of different samples. 21 references.

COTTON PRESERVATION WITH THE ARIGAL PROCESS. A. Ruperti. Melliand Textilber. 37, No. 12: 1419-1421 (1956). In German. Through BCIRA 37: 106 (1957). (2531)

Rotproofing of cotton fabric by the Arigal process (Ciba), consists in treatment of the fiber with a melamine-formaldehyde condensation product and fixing without preceding drying. The properties of the Arigal cotton are discussed and compared with those of acetylated and cyanoethylated fabrics during the soil-burial test.

THE DETERGENT ACTION OF ALKYLPOLYETHYLENE OXIDES. M. Kehren and M. Rösch. Melliand Textilber. 37, No. 10: 1194-1197; No. 11: 1308-1312; No. 12: 1421-1427 (1956). In German. Through BCIRA 37: 86 (1957). (2532)

Results are reported of washing tests with alkylpolyethylene oxides on wool. Detergent action of soaps in general and polyhydroxyethylates in particular is discussed, with respect to the relevant literature. 55 references.

HYDROGEN BONDING MECHANISM FOR THE PERMANENT SETTING OF WOOL FIBERS. A. J. Farnworth. Textile Research J. 27: 632-640 (Aug. 1957) (2533)

It is shown that wool fibers in which the cystine linkages have been permanently broken can be given a set in boiling water equal to that of normal fibers. Set imparted by water or steam can be released by further treatment at 10° to 20° C above that used in setting. Boiling solutions of reducing agents begin to impart permanent set in less than 15 sec., and a very high degree of permanent set is obtained within 30 sec. A high degree of permanent set can be imparted in a short time at low temperatures by treatment of extended fibers with a solution of urea containing a reducing agent. The resultant set is greater than that obtainable with boiling water after prolonged treatment, or with boiling alkaline solutions. The results are readily explained by breakdown and reformation of hydrogen bonds following scission of some cystine linkages. 24 references.

APPRAISAL OF SHRINK-RESISTANT TREATMENTS FOR WOOL. A. M. Sookne (Harris Research Labs., Inc., Washington, D. C.). Textile Research J. 27: 652-661 (Aug. 1957). (2534)

A review is presented of the mechanisms by which wool shrinks, and of the several classes of treatment available for making shrink-resistant wool. Some of the virtues and deficiencies of the better known classes of shrink-resistant processes are listed. The competitive position of shrink-resistant wool is examined in a number of end-use items. It is concluded that a number of low cost, adequate shrink-resistant processes are currently available, and that wool requires shrink resistance in order to compete with man-made fibers in end uses requiring ease-of-care. 12 references.

THE ACTION OF N-ETHYLMALEIMIDE ON WOOL AND ITS USE FOR THE ESTIMATION OF SULFHYDRYL GROUPS. R. W. Burley and F. W. A. Horden. Textile Research J. 27: 615-622 (Aug. 1957) (2535)

N-ethylmaleimide in pH 3.5 aqueous buffer solution combines slowly with intact merino wool. It combines more rapidly after the wool has been supercontracted or pulverized, and equilibrium is apparently reached when an amount about 30 or more per cent greater than the sulfhydryl-group concentration has reacted. Some of the physical properties of merino wool containing a known amount of reacted N-ethylmaleimide are described. 11 references.

DYEING AND PRINTING D 2

EFFECT OF EVERGLAZE FINISH ON THE COLORFASTNESS PROPERTIES OF VAT-DYED COTTON. Dyes & Chemicals Tech. Bull. 13: 152-156 (Sept. 1957). (2536)

A comprehensive picture of the effect of Zeset S fabric stabilizer on vat-dyed cotton, based on tests made in a textile mill incorporating Zeset S in the Everglaze finish. Tables.

FAST COLORS ON ARTIFICIAL SILK. S. K. Maiti. Indian Textile J. 67: 614-616 (July 1957). (2537)

Methods of dyeing viscose with naphthol dyes and with vat dyes and of dyeing acetate with azoic dyes are briefly discussed.

EFFECT OF ZESET S FABRIC STABILIZER ON THE COLORFASTNESS PROPERTIES OF VAT-DYED COTTON. Dyes & Chemicals Tech. Bull. 13: 143-151 (Sept. 1957). (2538)

A comprehensive picture of the effect of Zeset S fabric stabilizer on vat-dyed cotton, based entirely on laboratory work with the Zeset applied by the procedure given. Tables.

CONTINUOUS DYEING OF SECONDARY CELLULOSE ACETATE, CELLULOSE TRIACETATE, AND TERYLENE POLYESTER FIBER BY THE VAPOCOL PROCESS. D. A. Garrett (Imperial Chem Industries Ltd). J. Soc. Dyers Colourists 73: 365-374 (Aug. 1957). (2539)

A continuous dyeing technique is described in which fabrics of secondary cellulose acetate, cellulose triacetate, and Terylene are padded with disperse dyes and, after being dried, are subsequently immersed in the saturated vapor of trichloroethylene for times up to 60 sec. to fix the dyes on the fibers. The construction and the operation of a continuous plant handling 12-in. wide fabrics at speeds up to 10 yd./min. are described. Tables. Diagrams. Graphs. Photographs (including color). 4 references.

DYEING ACRILAN AND ACRILAN/WOOL UNIONS. F. M. Waterhouse. Textile Mfr. 83: 419-421 (Aug. 1957). (2540)

In this paper the author deals with use of sulfuric acid, neutralizing, dyeing methods, rinsing, overchroming and shading, saturation point, dyeing mixture fabrics, blocking-off in combination shades, and other points of interest.

DYEING OF ORLON ACRYLIC FIBER: APPLICATION OF CATIONIC DYES. J. P. Neary and R. J. Thomas (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 46: P625-P633 (Aug. 26, 1957). (2541)

The important factors concerning the application of cationic dyes to Orlon acrylic fiber are critically reviewed. The application of these dyes to rawstock, tow, top, yarn, and woven and knitted fabrics made of Orlon and to blends of Orlon with wool and with cellulosic fibers is considered. The introduction of a whiter, more dyeable Orlon staple further enhances the utility of cationic dyes. Graphs. Diagrams. 13 references.

PRACTICAL EXPERIENCES DURING DYEING OF POLYACRYLONITRILE BY THE SANDOCRYL PROCESS. H. Egli. Textil-Rundschau 11, No. 9: 527-530 (1956). In German. Through BCIRA 37: 75 (1957). (2542)

Results obtained in dyeing loose material or cheeses, continuous filaments, and mixtures of polyacrylonitrile and cellulose fibers using various dyeing machines are discussed.

DYEING BLENDS CONTAINING ACRYLICS. Man-Made Textiles 34: 57 (July 1957); 61 (Aug. 1957). (2543)

Part 1. Methods for solid, vat, and resist dyeing of Acrilan/cellulose blends are briefly described, with emphasis on fastness in relation to economics. Part 2. Recommendations for processing Acrilan in combination with acetate, nylon, or wool.

NEW FINDINGS IN DYEING POLYACRYLONITRILE FIBERS. K. Neufang. Melliand Textilber. 37, No. 12: 1435-1438 (1956). In German. Summary in BCIRA 37: 105 (1957). (2544)

DYEING BLENDS OF DACRON POLYESTER FIBER AND COTTON. J. J. Iannarone, Jr., P. L. Speakman, O. S. Larson, R. C. Hurt and E. H. Hinton (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 46: P674-P679 (Sept. 9, 1957). (2545)

Laboratory data are presented which showed that, with proper disperse dye selection, fabrics constructed from dyed and undyed yarns of Dacron and cotton can be finished satisfactorily without encountering serious difficulty with sublimation. Particular emphasis was placed on continuous procedures: pad-steam for pastel shades, Thermosol for light-to-medium shades, and a combination of Thermosol and pad-steam or pad-jig for the medium to heavy shades. The data presented for yarn dyeing and for the continuous dyeing of fabrics have been substantiated by numerous large-scale mill dyeings. Tables. 9 references.

DYEING WOOL AND SYNTHETIC FIBERS. J. G. Lee. Textile Mfr. 83: 415, 416 (Aug. 1957). (2546)

A discussion of present dyeing practice and some of the problems to be considered when dyeing yarn or cloth composed of blends of wool with polyamide, polyester, and acrylic fibers.

FINISHING CHEMICAL FIBERS. E. Brunnschweiler. Textil-Rundschau 11, No. 12: 709-723 (1956). In German. Through BCIRA 37: 104 (1957). (2547)

Dyeing and finishing of regenerated cellulose and protein, inorganic, and synthetic fibers are reviewed, with reference to special problems (stains in fabrics, fastness properties of dyeings, and fiber blending) and to cross-dyeings.

VAT DYEING OF SYNTHETIC FIBERS. PART 1. J. Müller. Melliand Textilber. 37, No. 11: 1321-1328 (1956). In German. Through BCIRA 37: 42 (1957). (2548)

Review of the possibilities and limitations of using esterified or non-esterified vat dyes for polyamide and polyacrylonitrile fibers. The behavior of Anthrasols or Indigosols on Perlon/viscose rayon, and the dye groups causing streakiness on Perlon fabrics are discussed.

DYEING MECHANISMS OF NEUTRAL METAL COMPLEX DYES ON POLYAMIDE FIBERS. H. Zollinger. Melliand Textilber. 37, No. 11: 1316-1317 (1956). In German. Through BCIRA 37: 42 (1957). (2549)

Experiments on the distribution equilibria of neutral metal complex dyes between water and nylon 66 are reported.

POLYAMIDE FIBER DYEING. F. Weber. Melliand Textilber. 37, No. 11: 1328-1332 (1956). In German. Through BCIRA 37: 42 (1957). (2550)

Methods for dyeing polyamide fibers are reviewed, and tables listing suitable dye groups are given.

DYEING OF NYLON, PERLON AND RILSAN. W. Kunze. Z. ges. Textil-Ind. 59, No. 1: 18-22 (1957). In German. Through BCIRA 37: 132 (1957). (2551)

Recent literature (1945-1956) dealing with methods for the identification and characterization of the individual fibers (dissolution, swelling, and staining reactions) is reviewed, and acid dyes and dyes stable to thermosetting and permanent pleating are listed, together with a brief description of their application.

DYEING POLYAMIDE FIBERS. Ciba Rev. No. 121: 34-36 (July 1957). (2552)

Ciba dyes and their application to nylon and other polyamide fibers.

DYEING POLYESTER FIBERS. G. Siegrist. Textil-Rundschau 11, No. 9: 520-527 (1956). In German. Through BCIRA 37: 74 (1957). (2553)

Problems associated with the application of disperse dyes to polyester fibers (carrier dyeing and high-temperature dyeing, including the thermosol process) are discussed, with brief reference to the fastness properties of the dyeings.

MACHINE DYEING POLYESTER FIBERS. R. Schwalenstöcker. Melliand Textilber. 37, No. 11: 1332-1333 (1956). In German. Through BCIRA 37: 43 (1957). (2554)

Suggestions for eliminating difficulties in dyeing loose material, yarns, or filaments.

EFFECT OF CERTAIN ACID DYE STRUCTURES ON THE RATE OF WOOL DYEING. J. H. Skinkle and E. W. Makuch (Lowell Technological Inst.). Am. Dyestuff Reptr. 46: P578-P582 (Aug. 12, 1957). (2555)

Data are presented on the effect of the basic dye structure, the size of the dye molecule, and the position of the sulfonic acid group or the shape of the dye molecule on the affinity of the dye for wool fibers and on the rate of dyeing. Table. Graphs. 7 references.

MICRO DYEING APPARATUS FOR LABORATORIES. F. Peter and B. Mihalik. Textil-Praxis 12: 478-479 (1957). In German. Through Chem. Abstracts 51: 12495 (1957). (2556)

A dyeing apparatus is described for circulating 250 cc. dye liquor, suitable for dyeing up to 10 g. fiber and convenient for analytical testing and control during dyeing.

AUTOMATIC CONTROL OF DYEING. L. Walter. Textile Bull. 83: 76-80 (Aug. 1957). (2557)

Dye vat uses of pneumatic, electric, and electronic temperature controllers, as well as controllers based on program control, are discussed.

DYEING HOSPITAL LINENS WITH VAT DYES. Dyes & Chemicals Tech. Bull. 13: 157-158 (Sept. 1957). (2558)

A recommended procedure for applying vat dyes in a wash wheel is outlined.

TROUBLE-FREE DYEING OF METALLIC YARNS. R. J. Thomas (E. I. du Pont de Nemours & Co.). Am. Textile Reptr. 71: 69, 80-81 (Aug. 15, 1957). (2559)

Recommendations are given for dyeing cotton, rayon, wool, nylon, Orlon, and Dacron fabrics containing metallic yarns to eliminate problems of delamination, dulling, discoloration, and staining.

PACKAGE DYEING WITH VAT DYES. M. Bräuer. Melliand Textilber. 37, No. 11: 1318-1321 (1956). In German. Through BCIRA 37: 42 (1957). (2560)

Measurements of the effects of temperature and alkalinity on vat dyeing rayon packages are presented in graph form.

MODERN PIECE DYEING OF CELLULOSE FIBERS. H. Heuberger. Melliand Textilber. 37, No. 12: 1427-1432 (1956). In German. Through BCIRA 37: 104 (1957). (2561)

Some problems to be taken into consideration when dyeing with direct dyes and dyes requiring aftertreatment are discussed.

DYEING STRETCH YARNS AND FABRICS OF DU PONT NYLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. July 1957. 5 p. Bull. N-97. Free. (2562)

Procedures for dyeing stretchable yarns and fabrics containing 100% nylon or blends of nylon and cotton. (Replaces bull. N-60.)

RELATION BETWEEN PHYSICAL STATE AND RATE OF FADING OF DYES. G. Baxter, C. H. Giles and W. J. Lewington (Royal Coll. of Sci. & Tech., Glasgow). J. Soc. Dyers Colourists 73: 386-392 (Aug. 1957). (2563)

The light fastness of dyes is determined by both chemical and physical factors, especially by their physical state in the fiber. This paper describes an analysis of the fading rates of a few typical dyes in several physical forms, and shows how the shape of its fading-rate curve may be used to diagnose the physical state of a dye. Graphs. 12 references.

RECENT DEVELOPMENTS IN ACID AND SUBSTANTIVE ANTHRAQUINONE DYES. J. Günthard. Textil-Rundschau 11, No. 11: 639-644 (1956). In German. Through BCIRA 37: 73 (1957). (2564)

The history and classification of anthraquinone dyes at the end of the classical period of anthraquinones (1925) are reviewed, and the introduction of acid anthraquinone dyes and substantive anthraquinone dyes are discussed.

ACID WOOL DYESTUFFS. H. Eglin and M. Perrig (Sandoz Ltd). Textile Merc. 137: 147-148, 160 (July 26, 1957). (2565)

A new chromatographic method for testing the dyeing properties of acid wool dyestuffs and some applications of the method are described.

MEASUREMENT OF DONNAN POTENTIALS WITH DYED CELLULOSE AND AQUEOUS SALT SOLUTIONS. S. M. Neale and P. K. Saha (Manchester Coll.). J. Soc. Dyers Colourists 73: 381-385 (Aug. 1957). (2566)

Measurements have been made of the electrical potential difference (Donnan potential) between dyed cellophane and aqueous solutions of alkali-metal chlorides. The presence of adsorbed colored ions of negative electric charge increases the negative potential of cellulose, whereas positively charged colored ions may reverse the sign of the charge. The measured potentials, while smaller than those predicted by the application of the Donnan theory, after making the usual simplifying assumptions, are in good general agreement with modern views of the mechanism of direct dyeing. Tables. Graphs. 7 references.

DETERMINATION OF THE MIGRATORY PROPERTIES OF DIRECT DYES. José Cegarra. J. Soc. Dyers Colourists 73: 375-381 (Aug. 1957). (2567)

The effects have been studied of four variables (temperature, electrolyte concentration, liquor ratio, and agitation) on the migration of direct dyes selected from Classes A, B, and C. At low temperatures increase of temperature has a more favorable influence with Classes A and B than with Class C. An optimum electrolyte concentration for maximum migration is shown by dyes of Classes A and B, but with Class C the migration diminishes steadily as the electrolyte concentration is increased. Increase in liquor ratio increases migration of B and C dyes, but not that of A dyes. Agitation increases migration in all cases. Graphs. 11 references.

NEOPALATIN DYES. H. Anders. SVF Fachorgan Textilveredlung 11, No. 11: 622-623 (1956). In German. Through BCIRA 37: 43 (1957). (2568)

Application, correction of dyeings, and dyeing of wool, wool/Perlon, and polyamides are described.

TESTING METHODS FOR TEXTILE ASSISTANTS. PART 11. VAT ACID DISPERSING POWER OF SURFACE ACTIVE SUBSTANCES. G. Schwen and C. Rackemann. Melliand Textilber. 37, No. 11: 1345-1347 (1956). In German. Through BCIRA 37: 43 (1957). (2569)

Surface-active agents were examined for their ability to prevent precipitation of vat dyes. The method for determining the minimum addition for preventing precipitation is described, and results are tabulated.

PRINTING POLYESTER FABRICS. C. Kuch. Melliand Textilber. 37, No. 11: 1333-1338 (1956). In German. Through BCIRA 37: 44 (1957). (2570)

Methods for printing with disperse dyes, vat dyes, leuco esters of vat dyes, and pigment dyes are described.

DISCHARGE DYEING OF POLYESTER FABRICS. A. Dürst. SVF Fachorgan Textilveredlung 11, No. 11: 620-621 (1956). In German. Through BCIRA 37: 45 (1957). (2571)

Compositions are given of white and colored discharge pastes containing a carrier dissolved in Lyogen TG. The method described is only applicable to screen printing. Sandothrene dyes suitable for colored discharge printing are listed.

SOLVENTS SPEED UP VIGOUREUX PRINTING. Wool Bureau. Textile World 107: 147, 228 (Sept. 1957). (2572)

Good color fixation in a short steaming period can be achieved in vigoureux printing when a method developed in Australia is used. The new process is based on dissolving the colors in a solvent and raising the steaming pressure. Tables.

NEW VAT DYE PRINT EMULSION. Metro-Atlantic Inc. Am. Textile Reptr. 71: 19, 21, 109 (Aug. 15, 1957). (2573)

Vatclear concentrate is a water-soluble vat dye printing emulsion, stable to electrolytes, which makes complete print processing control possible for the first time through every step from bleached cloth to finished fabric. The new product contains no resins and is composed of water, solvent, stabilizers, emulsifiers, and a specially developed protective colloid from which the printing emulsion is prepared.

PRINTING TUFTED CARPETS. Imperial Chem. Industries Ltd. Man-Made Textiles 34: 58, 60 (Aug. 1957). (2574)

A tentative printing process for applying Procion dyestuffs to viscose tufted carpet is outlined.

COPPER AND CHROMIUM PLATING OF PRINTING ROLLERS. Z. ges. Textil-Ind. 58, No. 22: 883-886 (1956). In German. Through BCIRA 37: 18 (1957). (2575)

General survey.

THICKENING AGENTS IN PRINTING. A. Franken. Tex 15, No. 10: 1400-1402; No. 11: 1574-1575 (1956). In Dutch. Through BCIRA 37: 44 (1957). (2576)

Properties, uses, and advantages of Nafka Crystal Gum Supra, a thickening agent with the same characteristics as natural gums, but with 3-4 times higher thickening power.

SCREEN PRINTING ON TEXTILES. H. Schönefeld. Textil- u. Faserstofftech. 6, No. 11: 506-511 (1956). In German. Through BCIRA 37: 76 (1957). (2577)

Screen printing of textiles is reviewed, including its optical and photographic principles and the photographic technique of color mixing. Preparation of screen-printing stencils and their use are described in some detail.

MECHANICAL PROCESSES D 3

FINISHING MACHINERY. Johannes Menschner Textilmaschinenfabrik. SVF Fachorgan Textilveredlung 11, No. 11: 642-647 (1956). In German. Through BCIRA 37: 45 (1957). (2578)

Descriptions of a high-efficiency cloth cleaning and cropping machine, a selvage-cutting machine, a calibrated measuring and rolling machine, a calibrated measuring and folding machine, and an automatic fault-marking apparatus.

NEW PROCESS FOR COMPACTING TEXTILE MATERIALS. Fabric Research Labs. Wool Sci. Rev. No. 17: 50-61 (July 1957). (2579)

Fabric Research Laboratories' fabric compacting machine, for use in cloth finishing, is described. It has novel possibilities for relaxation shrinkage control and for modifying a number of other important fabric properties. Tables. Diagrams. Photographs. 11 references.

DRYING D 4

INVESTIGATIONS INTO THE DRYING OF FABRICS. J. Juilfs. Melliand Textilber. 38, No. 1: 88-91 (1957). In German. Through BCIRA 37: 135 (1957). (2580)

Basic problems involved in drying (hygroscopic equilibrium, water absorption of the fibers, and time-dependent interrelationship between drying medium and swelling of the fibers) are discussed, with reference to practical drying experiments on viscose spun rayon fabric and cotton cretonne, the results of which are evaluated.

BRIGHT OR DARK RADIATORS FOR THE HEAT TREATMENT OF TEXTILES. W. Brügel. Melliand Textilber. 37, No. 12: 1456-1457 (1956). In German. Through BCIRA 37: 106 (1957). (2581)

The bright radiator, whose wavelength of maximum emission is in the near infrared is a better heat source in textile drying and finishing, penetrating uniformly and deeply into the material, than the dark radiator, which heats the surface layers excessively and may cause tendering of the fiber.

IMPROVING EFFICIENCY OF TEXTILE DRYING. L. Walter. Fibres 18: 261-263 (Aug. 1957). (2582)

Points to consider in assessing the performance of textile drying machinery are discussed. Diagrams. Graph.

TESTING AND MEASUREMENT E

REGISTERING, MEASURING, AND TESTING DEVICES. H. Stein. Reyon Zellwolle Chemiefasern 34, No. 12: 853-860 (1956). In German. Through BCIRA 37: 113 (1957). (2583)

Devices for studying the processes in the spinning and winding zones of ring-spinning and ring-doubling machines and for determining yarn tensions on various looms and preparatory machines for weaving are reviewed.

APPLICATIONS OF ELECTRONICS IN THE TESTING OF TEXTILES. H. Catling (Brit. Cotton Industry Res. Assoc.). Textile Merc. 137: 225-228 (Aug. 9, 1957). (2584)

The principles and application of electronic testers to yarn uniformity determination (capacity-type and photoelectric instruments) and to cloth grading (Shirley starting-place counter) are discussed. Diagrams.

INSTRUMENT DEVELOPMENTS. J. W. S. Hearle. Skinner's Silk & Rayon Record 31: 840-842 (Aug. 1957). (2585)

Recent developments in instrumentation techniques are briefly reviewed, including the Perkin-Elmer Infracord spectrophotometer, internal thickness gauging for surface coatings by means of radioisotopes, a beta-ray evenness analyzer for testing yarn uniformity, the McArthur high power microscope small enough to hold in the palm of the hand, the Stanton balances for denier and count determination, Townson and Mercer flexible glove cabinet for carrying out experiments in sterile air or inert atmospheres, an environmental test chamber to fit the Instron tensile testing instruments, U.S. Testing Co. pendulum impact tester and Walker yarn abrader, and the Maschinenfabrik Baech optimum twist tester. Diagrams. Photographs.

INSTRUMENTATION AND QUALITY CONTROL. W. T. Cowhig. Textile Wkly. 57: 521-524, 530 (Aug. 23, 1957). (2586)

British Rayon Research Association instruments are reviewed briefly.

FIBERS E 1

CLASSIFICATION DIFFERENCES IN COTTON STAPLE. H. Langer. Textil- u. Faserstofftech. 6, No. 11: 489-492 (1956). In German. Through BCIRA 37: 80 (1957). (2587)

Methods for determining the staple length of cotton are reviewed and compared with the method of Shukov which, based on staple weight and not on the number of fibers and excluding from the results the short fibers below 8.5 mm, is shown to give overestimates. The difference between fiber-weight and fiber-number diagrams is briefly explained and the usefulness of the effective staple length and of the variation coefficient of staple length in qualitative evaluation of cotton is pointed out.

INTERPRETATION OF A MATHEMATICAL STUDY OF COTTON FIBER DIAGRAMS. D. Gautier. Bull. Inst. Textile France No. 62: 55-76 (Aug. 1956). In French. Through BCIRA 37: 81 (1957). (2588)

The study of three diagrams obtained in practice and of a theoretical diagram based on fiber length leads to the conclusion that, from a series of theoretical curves, it should be possible to obtain all the characteristic values necessary for adjusting spinning machinery to the fiber length and selecting the type of raw material to give a final product of predetermined quality.

EFFECT OF STRUCTURE DISORDERS AT THE CUT SURFACE ON THE WILLOWS-ALEXANDER REACTION. K. Schwertassek. Faserforsch. u. Textiltech. 7, No. 10: 477-479 (1956). In German. Through BCIRA 37: 22 (1957). (2589)

The formation of amorphous cellulose at the cut surface adversely affects the W.-A.- reaction by lowering its sensitivity. This effect can be eliminated by wetting the cut surface of the prepared fibers with water and evaporating the water over a micro-burner. The amorphous cellulose recrystallizes at the cut end and any damage present is made visible with more than double sensitivity.

SIMPLE METHOD FOR THE IDENTIFICATION OF SYNTHETIC FIBERS. J. Khachoyan. Teintex 21, No. 11: 863-871 (1956). In French. Through BCIRA 37: 82 (1957). (2590)

Methods for the identification of synthetic fibers are reviewed, and two rapid and simple staining methods, applicable to dyed and undyed fibers, using Identex I for natural and Identex II for synthetic fibers are described. Identex (marketed by Francolor) gives characteristic color reactions with the individual fibers (listed in a table and shown on a pattern card).

COTTON/VISCOSE STAPLE MIXTURES: COTTON LOSSES DURING QUANTITATIVE SEPARATION BY THE BASIC ZINC CHLORIDE METHOD. G. Poles and A. Della Giovanna. Tinctoria 53, No. 12: 524-527 (1956). In Italian. Through BCIRA 37: 112 (1957). (2591)

Weight losses of grey and bleached cotton, respectively, due to the separation of cotton/viscose staple fiber mixtures by means of basic zinc chloride, were determined and compared with those resulting from treatments with sulfuric acid, sodium zincate, caustic soda, and calcium sulfocyanide, respectively. It was found that the basic zinc chloride method is quicker and more convenient, and gives values comparable as regards accuracy to those obtained with sodium zincate.

COMPARATIVE TESTS ON ELASTIC AND PERMANENT ELONGATION OF FIBERS. J. Juilfs. Forschungsber. Wirtsch. u. Verkehrsmin. Nordrhein-Westfalen No. 307: 1-24 (1956). In German. Through BCIRA 37: 81 (1957). (2592)

Measurements of the proportion of permanent and elastic stress-elongation in viscose rayon, Perlon, and cellulose acetate show a characteristic effect of the type of the testing device, both on the magnitude of elongation and the shape of the curves. Comparison of various testers shows that quantitative interpretation and determination of this effect is only possible if the complex elongation mechanism in the fiber is fully elucidated, the terms permanent and elastic elongation being not absolute values but based on the respective testing procedures.

STATISTICAL OBSERVATIONS ON THE ESTIMATION OF FIBER STRENGTH. I. G. Cumming (Imperial Chem. Industries Ltd). J. Textile Inst. 48: T143-T153 (May 1957). (2593)

The error likely to arise when the mean strength of a lot of fiber is calculated from the mean fineness and mean breaking load instead of from the individual fiber strengths is considered mathematically. It is shown that, for large samples, the error involved depends on the coefficients of variation of breaking load and diameter and on the correlation coefficient between these two variables. For small samples, the error is found in practice to be small compared with the extent to which the mean of the individual strengths is likely to be in error as a result of the smallness of the sample. 6 references.

ANALYSIS OF POLYAMIDES 66, 6, AND 11 BY MEANS OF PAPER CHROMATOGRAPHY. G. Poles and M. C. Peverati-Scandurra. Tinctoria 53, No. 12: 509-514 (1956). In Italian. Summary in BCIRA 37: 112 (1957). (2594)

DEVELOPMENT OF PROCEDURES FOR MEASURING THE REGULARITY OF THE APPARENT DIAMETER OF FIBERS. A. Barella. Ann. Sci. Textiles Belges No. 3: 62-77 (Sept. 1956). In French. Through BCIRA 37: 80 (1957). (2595)

Methods and photoelectric devices, developed since 1928, for measuring the regularity of the apparent fiber diameter are reviewed, with special reference to recent developments: the Barella regularimeter, the Standard Electronics Research Corp. apparatus, the Linra photoelectric irregularity gauge and the Linra photo slubber, the Tiana regularimeter (Spanish), the methods of Grüner and Natus, the apparatus of Maillard and Amouroux, and the Vieluba tester.

YARNS E 2

DETERMINATION OF THE BREAKING LOAD (TENSILE STRENGTH) OF FIBERS, FILAMENTS, AND YARNS. J. Juilfs. Melliand Textilber. 37, No. 12: 1376-1380 (1956). In German. Summary in BCIRA 37: 111 (1957). (2596)

A review. 20 references.

TRACING PICKER-LAP VARIATIONS. W. A. Thomason, Jr. Textile World 107: 148, 216, 218 (Sept. 1957). (2597)

STANDARDS OF SLIVER UNIFORMITY. Textile Age 21: 12 (Aug. 1957). (2598)

This tabular compilation of the latest sliver standards includes Saco-Lowell, Uster, and Brush tester standards.

VIELUBA THREAD REGULARITY APPARATUS. A. Barella, L. Viertel, A. Lupresti and P. Salvany. Fibres 18: 265-268, 271 (Aug. 1957). (2599)

Features of each of the parts of the Vieluba uniformity apparatus are described as follows: (1) apparatus for measuring the regularity of the apparent diameter and hairiness of threads (Model AB, 1956), (2) apparatus for measuring the regularity of the mass of sliver, slubbing and threads (Model SY, 1956), (3) recording instruments, (4) integrator and defect counter, (5) thread dragging device. Photographs. Graphs. Tables. 12 references.

TEX: UNIVERSAL YARN NUMBERING SYSTEM. J. W. S. Hearle (Univ. of Manchester). (Letter to the editor). J. Textile Inst. 48: P416-P417 (July 1957). (2600)

SHORT-DURATION TESTS ON THREADS STRESSED IN LONGITUDINAL DIRECTION, USING VARIOUS TESTING METHODS. W. Wegener and D. Hanusek. Reyon Zellwolle Chemiefasern 34, No. 11: 770-779; No. 12: 846, 852 (1956). In German. Through BCIRA 37: 113 (1957). (2601)

Comparison is made of the results obtained on seven different yarns by measuring the breaking load and elongation at break by means of the pendulum dynamometer, the Statigraph, and the Dynagraph. The mechanisms of these devices are described and differences between the static testing methods and tests on the running thread are pointed out.

MEASUREMENT OF YARN SMOOTHNESS. J. Juilfs. Forschungsber. Wirtsch. u. Verkehrsmin. Nordrhein-Westfalen No. 308: 1-21 (1956). In German. Through BCIRA 37: 83 (1957). (2602)

Measuring devices for testing smoothness and friction, developed by the Krefeld Textile Research Institute, are described. The devices comprise a tension meter with additional device for smoothness measurement, a smoothness tester with electric tension-registering means, and a yarn abrasion tester.

SET OF TABLES FOR PREDICTING YARN SKEIN STRENGTHS. J. F. Bogdan (N.C. State Coll.). Am. Textile Reptr. 71: 9, 34 (Sept. 5, 1957). (2603)

With a given cotton mix and actual skein break of one yarn, the breaking strength of both carded and combed yarn skeins can be quickly estimated for many counts and twist multiples. A typical table is partly reproduced. Copies of all the tables can be obtained from the Department of Textile Research, School of Textiles, N.C. State College, Raleigh, N.C.

LENGTH VARIATION CHARACTERISTICS IN MASS AND TWIST. W. Wegener and G. Probst. Melliand Textilber. 37, No. 12: 1374-1375 (1956). In German. Through BCIRA 37: 113 (1957). (2604)

Methods for determining the mass and twist variations of a cotton yarn over a certain length are described and the curves obtained are compared.

FABRICS E 3

NEW ABRASION MACHINE. E. E. Stout (N. Y. State Coll. of Home Economics, Cornell Univ.). Textile Research J. 27: 649-651 (Aug. 1957). (2605)

This new type of abrasion machine was developed to more nearly meet college laboratory requirements than the available machines. Specifications were that (1) the machine be simple to operate and keep in adjustment; (2) it abrade a large enough sample of fabric for a series of follow-up tests; (3) it be possible to abrade either a hemmed or an unhemmed sample; (4) the material used for construction be some sort of metal to ensure durability; (5) the metal parts be covered with a non-rigid material over the abrading surface in order to more nearly represent the "give" of a human body; (6) lint removal be by a simple method that could be carried on without stopping the machine; and (7) a choice of a number of different abradants be usable.

TESTING UNIFORM CLOTH FOR PILLING TENDENCY. COMPARATIVE TESTS ON UNIFORM TRICOT BY VARIOUS METHODS. W. Heydeck. Melliand Textilber. 37, No. 12: 1399-1403 (1956); 38, No. 1: 32-36 (1957). In German. Through BCIRA 37: 141 (1957). (2606)

Devices and methods for testing the pilling tendency of tricot made from 70% wool, 15% rayon staple and 15% Perlon are reviewed and the results are summarized and compared with those obtained on other cloths (95% wool + 5% Perlon, and 100% wool, respectively).

METHODS OF TEST FOR THE FLAMMABILITY OF APPAREL, HOUSEHOLD, AND FURNISHING FABRICS. J. Textile Inst. 48: P418-P425 (July 1957). (2607)

Tentative textile standard no. 40a, superseding tentative textile standard no. 40. Two procedures are specified: Method A: Vertical strip test and Method B: The 45° test.

MEASUREMENT OF THE SHEARING PROPERTIES OF FABRICS. B. Mörner and T. Eeg-Olofsson (Swedish Inst. for Textile Research). Textile Research J. 27: 611-614 (Aug. 1957). (2608)

An instrument is described and illustrated for measuring the shearing properties of a fabric deformed in its own plane. 5 references.

OTHER E 4

EVALUATION OF WHITENING EFFICIENCY OF FLUORESCENT WHITENING AGENTS. E. Allen (Am. Cyanamid Co.). Soap Chem. Specialties 33: 40-44, 93-99 (July 1957); 55-56, 115 (Aug. 1957). (2609)

Advantages and disadvantages of evaluation methods now in use are discussed, and improved methods for direct comparison of whiteners of different types are described. Graphs. 3 references.

CHEMICAL TESTING OF CREASE-RESISTANT TEXTILES. W. Himmelreich. Textil- u. Faserstofftech. 6, No. 10: 465-469 (1956). In German. Through BCIRA 37: 45 (1957). (2610)

Critical review of tests for total formaldehyde and free formaldehyde liberated during ironing.

ELECTRONIC DEVICES IN THE TEXTILE INDUSTRY. N. H. Chamberlain (Univ. of Leeds). Textile Merc. 137: 309-312 (Aug. 23, 1957). (2611)

Primarily a discussion of the present and potential use of electronic devices with direct application in the industry itself at the factory level.

SUNLIGHT VS. DAYLIGHT TEST METHODS: RECENT INVESTIGATIONS IN THE U.S.A. C. H. A. Schmitt (Sandoz, Inc.). Can. Textile J. 74: 57-65 (Aug. 23, 1957). (2612)

The author discusses sunlight vs. daylight; variations in sunlight testing; the Langley unit method of testing, and check tests of the Langley method. Charts. Photographs. 7 references.

RELATIONSHIPS OF LIGHT, COLOR, AND BIOLOGICAL PROCESSES. H. Zukriegel. Melliand Textilber. 37, No. 12: 1452-1456 (1956). In German. Through BCIRA 37: 114 (1957). (2613)

Relationships between the radiation wavelength, color effect, and biokinetic reactions are discussed, with reference to fading tests with filtered sunlight, to the efficiency of optical bleaching agents, and to lightfastness measurements by using Xenon high-pressure lamps.

PROBLEMS ASSOCIATED WITH EFFLUENT PURIFICATION. M. Kehren and H. Denks. Z. ges. Textil-Ind. 58, No. 22: 879-883; No. 24: 958-959 (1956). In German. Through BCIRA 37: 87 (1957). (2614)

Methods for determining iron in dye-containing effluents, with reference to the chemicals used, arrangement of the tests, determination of dye and iron simultaneously, determination of pH values in iron- and dye-containing solutions, and analyses of the cast iron used and of the water supply are reviewed. 20 references.

ISOLATION AND DETERMINATION BY ION EXCHANGE TECHNIQUE OF NONIONIC SURFACTANTS. L. E. Weeks, M. E. Ginn and C. E. Baker (Monsanto Chem. Co.). Soap Chem. Specialties 33: 47-50, 113, 115 (Aug. 1957). (2615)

The nonionic portion of a detergent based on combinations of nonionic and ionic surfactants can be determined gravimetrically following sorption of ionic surfactants from an aqueous ethanol solution on anion and cation exchange resins. Accuracy and reproducibility are satisfactory and the method can be used for routine analysis. Diagram. Tables. 12 references.

NOMOGRAPH FOR CALCULATING COLOR DIFFERENCES USING THE ADAMS-NICKERSON EQUATION. D. P. Adams, H. E. Derby, Jr., R. E. Ernsberger and R. B. Solo (Mass. Inst. Tech.). Am. Dyestuff Reptr. 46: 649-654 (Sept. 9, 1957). (2616)

This paper describes a nomographic method of evaluating small color differences according to the Adams-Nickerson equation. This nomograph permits direct evaluation of ΔE from ΔX, ΔY, and ΔZ without the use of tables or calculation. The average error introduced by use of the graphical technique is 2%. Tables. Graphs. 13 references.

INDUSTRIAL ENGINEERING F

MILL PRODUCTION BALANCE SHEET. Textile Bull. 83: 51-53 (Aug. 1957). (2617)

Factors to consider in preparing a mill balance sheet to calculate the total poundage expected out of the cloth room, in the gray goods plant, are outlined, including picking, carding, drawing, roving, spinning, and weaving. Facts revealed by a mill balance sheet will clearly show bottlenecks which may previously have seemed shortages due to inefficient operation.

NEW WAY TO MEASURE MANAGEMENT PERFORMANCE. P. M. Thomas. Textile World 107: 121-127 (Sept. 1957). (2618)

The method is based on measuring energy used and paid for, both in the form of power and in the form of labor manhours. It is in use to some extent in other industries, but the mill use on which this report is based is the first instance of its use in the textile industry. This measurement method can help management to pinpoint good and bad performance, isolate the need for improvement, and show how management is progressing in one of the basic factors that help determine costs and profits. Graphs.

MACHINERY AND MAINTENANCE F 1

MATERIALS HANDLING. Textile Bull. 83: 81-83 (Aug. 1957). (2619)

This article describes some specific materials handling systems in use and gives reasons for the need for handling equipment. Some of the basic principles involved in the operation of fork trucks and the responsibility for development of handling systems are discussed. Photographs.

HOW OPERATIONS RESEARCH AIDS MATERIALS HANDLING. I. Heitner (Western Electric Co.). Modern Materials Handling 12: 107-111 (Aug. 1957). (2620)

Application of linear programming to reduce distribution costs, as regards shipping, servicing time, and inventory carrying charges.

STANDARD METHODS IN QUALITY CONTROL: BLUEPRINT FOR TUFTED TEXTILES. PART 2. SCHEDULED MAINTENANCE. Man-Made Textiles 34: 51-54 (Aug. 1957). (2621)

Recommended maintenance schedule (developed by Cobble Bros. Machy. Ltd) for checking tufting machinery is outlined. Diagrams.

BEARINGS, LUBRICANTS, AND LUBRICATION: A DIGEST OF 1956 LITERATURE. Mech. Eng. 79: 842-852 (Sept. 1957). (2622)

A review of the 1956 literature under the headings: journal bearings, thrust bearings, gears, rolling element bearings, boundary lubrication, metalworking lubrication, automotive lubricants, properties of lubricants, and books. 163 references.

WASTE DISPOSAL F 2

CLARIFICATION AND RE-USE OF CLARIFIED RETTING WATER. L Ghyssaert and J. Verbeke. Bull. centre belge étude et document. eaux (Liége) No. 35: 23-27 (1957). In Dutch with French summary. Through Chem. Abstracts 51: 12496 (1957). (2623)

The previously described clarification of flax retting water by aeration in the presence of yeast and flocculation with lime has been adapted to plant-scale use. Flocculation was improved by use of $Al_2(SO_4)_3$, but the growth of yeast was impaired. Addition of NH_4OH gave a clearer water. The high pH of the water is a disadvantage, but is required for economical removal of Fe. Electrolytic clarification and clarification with active clay compare unfavorably with the yeast process because of poor removal of Fe.

DISPERSED GROWTH AERATION OF COTTON FINISHING WASTES. PART 2. EFFECT OF HIGH pH AND LOWERED AIR RATE. N. L. Nemerow. Am. Dyestuff Reptr. 46: 575-576 (Aug. 12, 1957). (2624)

Data on the effect of neutralization and dispersed growth aeration on cost and efficiency of cotton mill finishing waste treatment are presented. Table.

TEXTILE WASTES: RECOVERY AND TREATMENT. R. H. Souther and T. A. Alspaugh (Cone Mills Corp.). Sewage and Ind. Wastes 29: 918-935 (Aug. 1957). (2625)

Methods used to reduce the liquid waste load from textile mills are discussed, including closer control of wet processes, process modification, recovery of usable products for reuse, substitution of low-B. O. D. chemicals for higher B. O. D. ones, and good housekeeping practices. Physical, chemical, and biological means of treating textile wastes are also discussed. Tables. 15 references.

WASTE DISPOSAL IN THE TEXTILE, LEATHER, AND PAPER INDUSTRIES. M. Kehren. Ciba Rev. No. 121: 3-32 (July 1957). (2626)

"Some differences between British, American, and Continental practice," by L. Klein, p. 3; "Problem of waste water treatment," p. 4-7; "Chemical nature of effluents from the textile, leather, and paper industries," p. 8-12; "Disposal and clarification of liquid wastes," p. 13-22; "Flocculation of trade wastes with iron compounds," p. 22-24; "Treatment of strong industrial wastes on the Continent," p. 25-27; "Building and operating costs of modern treatment plants," p. 28-31; Bibliography, p. 31-32.

TREATMENT OF WOOL WASTES. A. M. Buswell and H. F. Mueller (Univ. of Florida, Gainesville). Proc. Ind. Waste Conf., 11th Conf.: 160-165 (1956). Through Chem. Abstracts 51: 12497 (1957). (2627)

In laboratory experiments, 68% of the grease in unprocessed wool was removed by methane fermentation in the presence of sewage-plant overflow liquor. The wool is not affected by the fermentation, and the need for soaps and alkalies for degreasing is eliminated. Potash is concentrated in the digester liquor and can be recovered. Equipment for application to the industrial scale is discussed.

QUALITY CONTROL F 3

STATISTICAL QUALITY CONTROL: A REVIEW OF CONTINUOUS SAMPLING PLANS. G. Gregory. J. Textile Inst. 48: P467-P481 (Aug. 1957). (2628)

The situations suitable to the application of continuous sampling plans are discussed. An outline of the different classes of plans is given and methods of selection of a particular plan are indicated. Graphs. 7 references.

UTILIZATION RESEARCH TO IMPROVE AND CONTROL THE QUALITY OF COTTON TEXTILE PRODUCTS. M. DuPré, Jr., R. M. Persell and E. L. Skau. J. Textile Inst. 48: P453-P466 (Aug. 1957). (2629)

This paper reviews current and recent research at the Southern Regional Research Laboratory on the improvement and control of the quality of cotton textile products. Summaries are also given of some closely related earlier work. 33 references.

IMPORTANCE OF QUALITY AND PROCESS CONTROL TO THE RETAILER. E. Kann. J. Textile Inst. 48: P443-P452 (Aug. 1957). (2630)

INTRODUCTION TO QUALITY CONTROL. M. Romer (Industrial Rayon Corp.). Am. Dyestuff Reptr. 46: P537-P538, P552 (July 29, 1957). (2631)

Discusses means of achieving added market value, relative cost of added quality, and organizational setups.

QUALITY CONTROL IN COTTON SPINNING AND WEAVING: SOME PRACTICAL RESULTS. A. Barella and L. Viertel. J. Textile Inst. 48: P520-P541 (Aug. 1957). (2632)

Results obtained during the introduction of statistical quality control techniques into six Spanish mills with more than 100,000 cotton spinning spindles and 1,500 looms are described. A brief description of the control methods employed and the particular manufacturing processes used in each mill are given. The results are compared and discussed together with the suitabilities of the several spinning processes used for the materials employed--cotton, staple rayon and mixtures. A new statistical control technique is suggested to deal with defects and a commercial control that is now applied to the manufacture of cotton velveteens and fabrics for military use is described. Tables. Graphs. 19 references.

OTHER F 4

TIME STUDY AND STATISTICS. A. W. Swan. Engineer 202: 609-611 (Nov. 2, 1956); 644-646 (Nov. 9, 1956). Through BCIRA 37: 34 (1957). (2633)

The application of statistical methods to time study and the possible deductions that may be made from correlation-regression scatter diagrams in time study work are discussed. Rated time studies relating to the handling of rayon cakes and cone winding are analyzed.

WATER TREATMENT IN THE CARPET INDUSTRY. G. Ferencz (Imperial Chem. Industries Ltd). Dyer 118: 263-265 (Aug. 16, 1957). (2634)

Process water, steam for power, and treatment methods are briefly discussed.

SCIENCES G

CHEMISTRY G 1

CONFIGURATIONAL CHANGES IN POLYETHYLENE TEREPHTHALATE. I. M. Ward (Imperial Chem. Industries Ltd). Chemistry & Industry No. 32: 1102 (Aug. 10, 1957). (2635)

Support is offered for the hypothesis that configurational change is responsible for the major differences between the infrared spectra of crystalline and amorphous polyethylene terephthalate.

LABILITY OF STARCH UNDER THE INFLUENCE OF CELLULOSE, ESPECIALLY COTTON. M. Ulmann and B. Wendt. Kolloid Z. 148: 157-168 (1956). In German. Summary in Chem. Abstr. 51: 10102f (1957). (2636)

EFFECT OF CELLULASE ON THE DEGREE OF POLYMERIZATION OF CELLULOSE AND HYDROCELLULOSE. E. T. Reese, L. Segal and V. W. Tripp (Quartermaster Research and Development Center, Natick, Mass.). Textile Research J. 27: 626-632 (Aug. 1957). (2637)

On acid hydrolysis of cotton, the degree of polymerization (DP) of the insoluble residue falls rapidly to a low level (leveling off DP). Continued hydrolysis results in further losses in weight, but the DP, and the micelle dimensions, remain unchanged. The present investigation was undertaken to compare the action of enzymes on the micelles with that of acids. The study was broadened by the inclusion of hydrocelluloses from cottons treated in various ways, and further extended to include the parent materials from which the hydrocelluloses were prepared. 16 references.

EVALUATING CELLULOSE ACETYLATION REACTIVITY. C. J. Malm, K. T. Barkey, J. T. Schmitt and D. C. May (Eastman Kodak Co.). Ind. Eng. Chem. 49: 763-767 (Apr. 1957). (2638)

Tests were developed to measure the uniformity of cellulose, its rate of activation, and its acetylation activity. Measurements of moisture content of cellulose, sulfuric acid sorption and viscosity in cuprammonium solution of pretreated cellulose, adiabatic acetylation time-temperature relationship, and light scattering and transmission of acetylation mixtures are used to measure initial reaction, reactivities of the major portion and tail end fractions, and unreactive fractions. These tests show uniformity and reactivity of cellulose and rates at which individual fractions activate.

RELATION OF INTRINSIC VISCOSITY TO CELLULOSE CHAIN LENGTH: DEGREE OF POLYMERIZATION RANGE BELOW 400. W. J. Alexander, O. Goldschmid, and R. L. Mitchell (Rayonier, Inc.). Ind. Eng. Chem. 49: 1303-1306 (Aug. 1957). (2639)

The difference between actual or contour length of a cellulose chain and its effective "behavior length" in solution depends on the solvent, the temperature, and the type of derivative, and is a function of the chain length itself. However, this dependence on chain length is far greater when conversions to DP are made. This is particularly true in the DP range below 400. This study defines more clearly these relationships and suggests a basis for rationalizing DP values derived from viscosity measurements in different solvents and for materials of widely varying viscosity levels. Photographs. Graphs. 25 references.

BIOLOGY G 3

BACTERIOLOGICAL STUDIES ON COTTON. A. N. J. Heyn (Clemson Coll.). Textile Research J. 27: 591-603 (Aug. 1957). (2640)

Experimental data are presented on the occurrence of cellulose decomposing bacteria on raw cotton. From all samples of field cotton investigated, cellulose bacteria could be isolated starting from the moment shortly after the opening of the boll. The decomposition of raw cotton fiber, under the influence of some of these bacteria, was studied in the laboratory. A literature review (55 references) on cellulose decomposing bacteria is included.

UTILIZATION OF PLASTICIZERS AND RELATED ORGANIC COMPOUNDS BY FUNGI. S. Berk, H. Ebert and L. Teitell (Pitmann-Dunn Labs.). Ind. Eng. Chem. 49: 1115-1124 (July 1957). (2641)

Diesters of saturated, aliphatic dibasic acids can be utilized by fungi, if they contain 12 or more carbon atoms. The maleates are fairly fungus-resistant and the alkyl derivatives of phosphoric and phthalic acids do not serve as carbon sources for fungi. The polyhydric alcohols can be utilized by fungi, if the hydroxyl groups are on adjacent or end carbon atoms. An ether linkage into the carbon chain decreases ability to support fungus growth. Ability to grow on the compounds tested varied with the fungus, suggesting that conclusions concerning fungus-resistance, based upon one organism, may be misleading. Tables. Graphs. 19 references.

MISCELLANY H

BASIC FACTS ABOUT THE CARPET AND RUG INDUSTRY. 1957 EDITION. Carpet Institute, Inc., Empire State Building, New York 1, N. Y. 1957. 25 p. Free. (2642)

DEMAND FACTORS IN TEXTILES. A. M. Alfred and G. P. Williams. Textile Wkly. 57: 459-462, 474 (Aug. 16, 1957). (2643)

This British paper is concerned with the impact of stock changes on demand and is concerned with developments since 1953. It shows the changes in deliveries and final consumption of staple fiber, textile yarn, and tire fabric, but selects the movements in staple fiber production and consumption for detailed study. Graphs. Tables.

MANUAL OF THE TEXTILE INDUSTRY OF CANADA 1957. Canadian Textile Journal Pub. Co. Ltd., 223 Victoria Ave., Westmount, Montreal 6, Quebec. 1957. 318 p. (2644)

Contains articles on the technology and economics of the Canadian textile industry, machinery developments, and textile research. A buyers' guide section and a mill directory section are also included.

NEW ENGLAND TEXTILES AND THE NEW ENGLAND ECONOMY. Conference of New England Governors, Cambridge, Mass. Mar. 1957. 209 p. (2645)

Part 1. Report of the New England Governors' Textile Committee: Textiles in the New England economy. Part 2. Research report, by S. E. Harris. Major problems discussed are tariff policy, wage differentials, the threat to the woolen industry, new legislation on the dispersal of industry, flood insurance and control, and other federal legislation.

TEXTILE RECORDER ANNUAL 1957: BOOK OF THE YEAR. Harlequin Press Ltd, Manchester, England. 1957. 181 p. (2646)

This review of 1956 in the British textile industry includes surveys of trade and industry, and a series of articles on technical progress in the mills, new machines and equipment, trends in textile research, raw materials position, and textile statistics on imports and exports.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

YARN PRODUCTION B

APPARATUS FOR THE SEPARATION OF YARNS FROM A RUNNING STRAND. K. M. McLellan (to Industrial Rayon Corp.). USP 2 801 455, Aug. 6, 1957. (2647)

Device for separating out component yarns from a strand formed of low twist yarns for processing treatments.

OPENING, PICKING, FIBER PREPARATION B 1

DUST EXTRACTING IN FIBER OPENING, CLEANING, AND LAP-FORMING MACHINES. W. J. Senior (to T.M.M. (Research) Ltd). BP 749 538, May 30, 1956. Through BCIRA 37: 155 (1957). (2648)

The opened fiber is conveyed in an air stream along a curved duct on the inner side of which is located a rotary dust-extraction cage which removes the dust and light particles while the fibers follow the outer wall of the curve. The three sheets of drawings show the device fitted in a porcupine opener.

STRIPPING MEANS FOR LATTICE CONVEYORS. W. A. Hunter (to T.M.M. (Research) Ltd). BP 768 369, Feb. 13, 1957. Through BCIRA 37: 127 (1957). (2649)

Bristle brushes are interposed between the blades of a stripper cylinder mounted adjacent to a spiked lattice conveyor.

CARDING AND COMBING B 2

AUTOMATIC CLEANING DEVICE FOR RECTILINEAR COMBING MACHINES. Officina Meccanica St. Andrea-Novara SpA. BP 768 513, Feb. 20, 1957. Through BCIRA 37: 155 (1957). (2650)

A brush rocks about the upper jaw of the nippers.

HELLMANN COMBER CUSHION PLATE. J. S. Dudley (to Whitin Machine Works). USP 2 802 241, Aug. 13, 1957. (2651)

Spring plate adapted to move bodily with the cushion plate so as to raise the fringe into the needles of the top comb before it reaches the nip of the detaching comb. This arrangement results in the removal of more neps.

DRAWING AND ROVING B 3

COMBING AND DRAWING MACHINES. W. Nutter (to T.M.M. (Research) Ltd). BP 749 085, May 16, 1956. Through BCIRA 37: 155 (1957). (2652)

The problem of periodic variations in thickness of a sliver (prepared from fiber of staple length up to 2 1/2 in.), especially those arising from an inherent characteristic of the machine, such as the intermittent piecing operation in a rectilinear comber, is discussed. To reduce and randomize such irregularities the slivers are subjected simultaneously to a single drawing operation by passing them side by side through two successive pairs of rollers rotating at constant speed, the second pair having a higher surface velocity than the first pair, and independently drawn slivers are combined into an output sliver without intermediate controlling or twisting means.

MEASURING VELOCITY CHANGES IN DRAFTING ROLLS. L. Witcombe (to T.M.M. (Research) Ltd). BP 749 525, May 30, 1956. Through BCIRA 37: 156 (1957). (2653)

A magnetic recording tape is driven by the moving member and caused to pass a magnetic recording head that is fed with electrical impulses at constant frequency, so that signals are recorded on the tape at spaced intervals proportional to its mean speed between impulses. The tape is driven at a uniform speed past a magnetic pick-up head, the frequency of the output signals depending on the speed of the moving member. In testing the speed of a drafting roll the tape may be run between the roll and a spring-loaded rubber roll.

TIMING THE COMB SUPPORT BARS IN DRAWING FRAMES. Cav. Enrico Scarani & Figli SpA. BP 769 056, Feb. 27, 1957. Through BCIRA 37: 155 (1957). (2654)

Violent blows against the comb support bars or their guides are obviated.

TOP DRAFTING ROLL WEIGHTING MECHANISM. G. C. Anderson and G. B. Ingraham (to Saco-Lowell Shops). USP 2 801 448, Aug. 6, 1957. (2655)

Means for correcting the side force producing errors in top drafting roll weighting arms mounted for lateral swinging movement and loaded by means of coil compression springs.

SPRING AND SADDLE WEIGHTING ASSEMBLY FOR DRAFTING ROLLS. J. Noguera (to Casablancas High Draft Co. Ltd). USP 2 801 449, Aug. 6, 1957. (2656)

SPINNING, WINDING, TWISTING B 4

YARN SUPPORT MOUNTINGS FOR DOUBLE-TWIST SPINDLES. Soc. d'Etudes et de Recherches de Material Textiles. BP 747 383, Apr. 4, 1956. Through BCIRA 37: 14 (1957). (2657)

SPINNING SPEED REGULATORS FOR SPINNING AND TWISTING MACHINES. Siemens-Schuckertwerke AG. BP 749 150, May 16, 1956. Summary in BCIRA 37: 156 (1957). (2658)

PADDLE OR PRESSER FOR FLYERS OF SPINNING OR TWISTING MACHINES. J. Whitehead (to William Bodden & Son Ltd). BP 749 180, May 16, 1956. Through BCIRA 37: 156 (1957). (2659)

In order to make more compact bobbins, the presser head is bored with two holes in line with the horizontal part of the presser arm and spaced apart by a distance less than the staple length of the fiber, and constrictions in the thickness of the metal (e.g. U-grooves) are provided to guide the yarn from the presser on to the package and to keep the roving or yarn in compact form as it is twisted.

SUCTION DEVICE FOR TRAPPING BROKEN ENDS ON A RING FRAME. H. Thoma (Germany). BP 749 582, May 30, 1956. Through BCIRA 37: 157 (1957). (2660)

A motor with fan on its shaft is mounted as a unit on a bracket in the filter box which is divided in a plane perpendicular to the shaft by a gauze sheet dividing the fan from the motor. The motor is further protected by a gauze cover.

DRAG ARRANGEMENT ON SPINNING AND TWISTING MACHINES. H. A. Boyd (to J. & T. Boyd Ltd). BP 749 709, May 30, 1956. Through BCIRA 37: 156 (1957). (2661)

A centrifugal drag device, including weighted flexible members, is mounted on the tube and makes frictional contact with the dead spindle so that drag is maintained on the tube while rotating slowly but relieved as the speed of the tube increases.

YARN WINDING MACHINES. Maschinenfabrik Schärer. BP 767 778, Feb. 6, 1957. Through BCIRA 37: 129 (1957). (2662)

A reciprocal drive for traversing the thread guide of a winding machine is described. It enables the length of winding to be varied to give packages of various forms.

A CORD WINDER TO WIND, SECURE, MEASURE AND PREVENT ENTANGLEMENT OF CORD. T. C. Sproston. BP 767 822, Feb. 6, 1957. Through BCIRA 37: 129 (1957). (2663)

THREAD GUIDE ARRANGEMENT FOR ELIMINATING TENSION VARIATIONS. K. Aumann (to VEB Spinn- und Zwirnereimaschinenbau Karl-Marx-Stadt). BP 767 868, Feb. 6, 1957. Through BCIRA 37: 127 (1957). (2664)

PHOTOELECTRIC STOP MOTION. W. S. Robson (to Fairbairn Lawson Combe Barbour Ltd). BP 767 990, Feb. 13, 1957. Through BCIRA 37: 127 (1957). (2665)

The stop motion is applicable to spinning, twisting, or weaving machinery but is described in relation to the drafting of sliver (e.g. of jute).

SPINNING MACHINES. K. Ward (to Fairbairn Lawson Combe Barbour Ltd). BP 768 376, Feb. 13, 1957. Through BCIRA 37: 127 (1957). (2666)

The invention relates to a form of construction producible in sections, and therefore adaptable as regards total number of spindles, that is rigid and simple.

DRAFTING MECHANISMS OF SPINNING MACHINES. Estirajes Balmes SA. BP 768 691, Feb. 20, 1957. Through BCIRA 37: 156 (1957). (2667)

The supports for the upper rollers are arranged so that the pressure on the rovings is uniform and constant. A to and fro motion equal to that of the rovings is imparted to the rollers.

SPINDLES. A. G. McKay (to Lastex Yarn & Lactron Thread Ltd). BP 768 696, Feb. 20, 1957. Through BCIRA 37: 157 (1957). (2668)

Support for spindles carrying a rotating package from which yarn is drawn in spinning, twisting, and covering, that reduces power consumption and protects the package from contamination.

TRAVERSE MECHANISM FOR COP OR BOBBIN WINDING MACHINES. D. Delerue. BP 768 730, Feb. 20, 1957. Through BCIRA 37: 158 (1957). (2669)

A thread guide drum having a helicoidal guide slot and a compensating tension device is described.

STORAGE CONTAINER FOR THE DISPATCH OF YARN BOBBINS. Vereinigte Glanzstoff Fabriken AG. BP 769 071, Feb. 27, 1957. Through BCIRA 37: 153 (1957). (2670)

The container is loaded at the machine and its use makes wrapping unnecessary.

CUTTING DEVICE FOR BOBBIN STRIPPING. S. Fürst (to Walter Reiners). USP 2 797 053, June 25, 1957. (2671)

TRAVERSING ROLL. R. J. Gilbert (to E. I. du Pont de Nemours & Co.). USP 2 801 808, Aug. 6, 1957. (2672)

Grooved traversing roll containing replaceable, wear-resistant, ceramic yarn-bearing pins to permit high speed winding without yarn damage.

POSITIVE DOFFING MECHANISM FOR AUTOMATIC WINDING MACHINES. M. V. Sprayberry (to West Point Mfg. Co.). USP 2 801 807, Aug. 6, 1957. (2673)

TWO-FOR-ONE TWISTERS. E. Graf (to Saco-Lowell Shops). USP 2 802 329, Aug. 13, 1957. (2674)

Yarn storage wheel which guides multiple turns of yarn onto the wheel in nonoverlapping relation.

COMPOSITE METAL SPINDLE. J. D. Gleitz and L. J. Moulton (to Curtiss-Wright Corp.). USP 2 802 330 and 2 802 331, Aug. 13, 1957. (2675)

Spindle blade and whorl unit consisting of a steel shaft, an aluminum barrel, and a steel whorl for driving the spindle, all rigidly secured by press or shrink fitting on a common longitudinal axis.

SPINDLE STOP IN WINDING. H. C. Lindemann and D. Mindheim. USP 2 803 106, Aug. 20, 1957. (2676)

An electromagnetic arrangement which functions upon the occurrence of a broken strand of yarn in a winding operation to automatically disengage the spindle carrying the winding bobbin from an associated motor drive, and to simultaneously stop rotation of the bobbin.

SPEED CONTROL FOR WINDING MACHINES. J. R. Long (to Shuford Mills). USP 2 803 107, Aug. 20, 1957. (2677)

A simple and inexpensive fluid operated variable speed pulley assembly for progressively increasing the speed of spinning and twisting machines without requiring variable speed motors. The speed of the bobbins and traversing ring rail are increased as the package diameter increases.

YARNS B 5

PACKING COPS FOR STORAGE AND TRANSPORT. R. C. Watson. BP 748 997, May 16, 1956. Through BCIRA 37: 168 (1957). (2678)

In packing cones of glass and other man-made fiber yarns, two boards are provided with rows of holes, alternately (in one row) for the reception of the larger and smaller ends of the cones. A central pillar, with turnbuckles or the like, clamps the boards together so that the cones are prevented from rubbing and unwinding.

METHOD AND APPARATUS FOR TREATING FILAMENTS TO SIMULATE SPUN STAPLE YARN. Algemene Kunstzijde Unie NV. BP 767 835, Feb. 6, 1957. Through BCIRA 37: 128 (1957). (2679)

A twisted continuous-filament yarn is propelled by a high-velocity gas stream through a confined zone, after which the direction of travel is changed and the speed reduced. Random loops are formed in the yarn.

MOLDED PLASTIC SPOOLS FOR SEWING THREAD. J. & P. Coats Ltd. BP 767 843, Feb. 6, 1957. Through BCIRA 37: 131 (1957). (2680)

METHOD FOR THE PRODUCTION OF SYNTHETIC YARN. J. P. Bemberg AG. BP 767 889, Feb. 6, 1957. Through BCIRA 37: 128 (1957). (2681)

Yarn from a synthetic polymer (polyamide, polyester, polyacrylonitrile) is given a hot pre-stretching treatment to lower its breaking elongation and then twisted with a yarn of regenerated cellulose or cellulose acetate that has a similar breaking elongation.

PLIED TIRE CORD. NV Onderzoekingsinstituut Research. BP 768 584, Feb. 20, 1957. Through BCIRA 37: 157 (1957). (2682)

The cord, e.g. cotton, viscose rayon, nylon for tires, is subjected to tension and heat between the point of plying and the draw-off device to eliminate irregularities in internal stresses.

METHODS OF PROCESSING TEXTILE YARNS. N. J. Stoddard and W. A. Seem (to Universal Winding Co.). USP 2 803 108 and 2 803 109, Aug. 20, 1957. (2683)

This method of producing a variety of evenly and permanently crimped, wavy, or fluffed multifilament thermoplastic yarns with improved physical characteristics consists of: (1) drawing and twisting, (2) passing through a heat-setting zone, (3) cooling and untwisting. Heating is uniform and tension is controlled and correlated with heat.

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

WARPING MACHINE. A. W. C. Porter, W. C. Arnold and A. Robertson (to F. N. F. Machinery Mfg. Co. Ltd). BP 767 404, Feb. 6, 1957. Through BCIRA 37: 130 (1957). (2684)

The warp beam is held between a pair of end stocks, rotatable about a fixed axis and at least one of which has a brake, and has a sensitive feeler bearing on the warp sheet along a line prior to the sheet arriving at the warp beam. Movement of the feeler, as the diameter of the warp beam increases, causes an adjustment of the braking effort.

MAGNETIC SLIP COUPLINGS AND PACKAGE-WINDING APPARATUS. J. France (to T. M. M. (Research) Ltd). BP 768 041, Feb. 13, 1957. Through BCIRA 37: 130 (1957). (2685)

The invention relates to winding at constant tension in, for example, the production of weaver's beams.

TESTING THE PHYSICAL PROPERTIES OF SIZING LIQUIDS. Gebrüder Sucker GmbH. BP 768 472, Feb. 20, 1957. (Addition to BP 740 922). Through BCIRA 37: 158 (1957). (2686)

Viscosity is determined either simultaneously or alternately with the adhesive properties.

MACHINES FOR ENCIRCLING YARNS OR GROUPS OF YARNS WITH STITCHLOOPS. Titan AG. BP 768 617, Feb. 20, 1957. Through BCIRA 37: 158 (1957). (2687)

A machine is provided for separating groups of warp yarns, e.g. for use in looming operations.

WEAVING C 2

DEVICE FOR PREDICTING THE APPEARANCE OF FABRICS. A. R. Margary. BP 749 463, May 23, 1956. Through BCIRA 37: 159 (1957). (2688)

Optical arrangement (employing reflecting surfaces and lenses) for demonstrating the probable appearance of a fabric that might be produced by the combination of warp and weft (especially colored yarns) in different ways, e.g. red warp and blue weft in a twill weave.

A SHUTTLE FEELER AND CUTTING-OFF DEVICE FOR LOOMS WITH AUTOMATIC PIRN REPLENISHING MEANS. R. Hrdina. BP 767 668, Feb. 6, 1957. Through BCIRA 37: 130 (1957). (2689)

This modification of the device described in BP 691 672 eliminates the need for a separate gripping device for carrying the cut thread to a discharge point.

HEDDLE FRAMES. J. L. Lund (to T. Lund & Son Ltd). BP 767 737, Feb. 6, 1957. Through BCIRA 37: 130 (1957). (2690)

The ends of the side members, or the corner members, are provided with slots, to receive the ends of the slider bars which have recesses near their ends, and with locking devices.

AXMINSTER CARPET LOOMS. W. Felton. BP 767 856, Feb. 6, 1957. Through BCIRA 37: 130 (1957). (2691)

Means for connecting a wire to either each jacquard selector bar or to each yarn carrier or both, which does not possess the disadvantage of constant adjustment or result in frequent breakage.

LOOMS. J. V. Stobbs. BP 767 974, Feb. 13, 1957. Through BCIRA 37: 130 (1957). (2692)

The invention relates to a trap-bar, and a trap-box mounted on the lay, the bar being pivoted to the center weft fork, providing an improved weft stop motion.

TEMPLE ROLLERS. F. Darbyshire (to Blackburn Pioneer Mill Ltd). BP 768 275, Feb. 13, 1957. Through BCIRA 37: 130 (1957). (2693)

The temple rollers described are covered with rubber and have equally spaced grooves. They are suitable for weaving fine fabrics.

MAGAZINES OF THE SEMI-CIRCULAR TYPE FOR AUTOMATIC LOOMS. R. Hrdina. BP 768 576, Feb. 20, 1957. Through BCIRA 37: 159 (1957). (2694)

Device for bringing the pirns in the magazine successively into position under the hammer that ejects them from the magazine into the shuttle to be replenished.

LOOMS. W. V. Gledhill, L. Dudley, J. Cousen and A. Chappell (to Walter Gledhill & Sons Ltd). BP 768 660, Feb. 20, 1957. Through BCIRA 37: 159 (1957). (2695)

An automatic loom with fixed shuttle box at the magazine side and a number of rising and falling shuttle boxes at the other may be converted into a single-pick weft-mixing loom.

AUTOMATIC LOOM. Lanex SA. BP 768 674, Feb. 20, 1957. Through BCIRA 37: 159 (1957). (2696)

Automatic pick-at-will looms and improved means for weaving pick-and-pick fabrics.

WARP BEAM BRAKEDRUMS. Vyzkumny Ustav Tvarecich Stroju a Technologie Tvareni. BP 768 807, Feb. 20, 1957. Through BCIRA 37: 159 (1957). (2697)

The brakedrums for the warp beams are fixed to the loom.

STOP MOTION APPARATUS FOR JACQUARD MACHINES IN LACEMAKING. F. H. Haslam-Jones (to John Jardine Ltd). BP 769 098, Feb. 27, 1957. Through BCIRA 37: 159 (1957). (2698)

CENTER WEFT FORK MOTIONS FOR LOOMS. N. Hargreaves. BP 769 112, Feb. 27, 1957. Through BCIRA 37: 159 (1957). (2699)

Control for the movement of the cam slide that operates the tippler and weft-fork prongs.

SHUTTLE-LOADING DEVICE. I. Mulatti and L. Cremonini (to Soc. Coll. Adriano Gardella). USP 2 801 649, Aug. 6, 1957. (2700)

Mechanism for automatic looms using solid cops which will effect shuttle reloading without putting the weft fork out of action and without letting the shuttle traverse the shed after the cop is exhausted.

HAND NEEDLE-POINT CARPET LOOM. E. R. Valva. USP 2 802 254, Aug. 13, 1957. (2701)

GAUZE BORDERS ON FABRICS PRODUCED ON A SHUTTLELESS LOOM. R. Opletal, V. Svaty and A. Kubelka (to Výzkumný. Czechoslovakia). USP 2 802 488, Aug. 13. 1957. (2702)

METHOD AND APPARATUS FOR HAND LOOM WEAVING. L. W. Macomber. USP 2 803 267, Aug. 20, 1957. (2703)

KNITTING C 3

APPARATUS FOR RECTIFYING PULLED THREADS IN KNIT FABRICS. R. Susemihl (Germany). USP 2 800 778, July 30, 1957. (2704)

CONTROL DEVICE FOR CIRCULAR KNITTING MACHINES. L. Ferraguti (to Officine Moncenisio S.p.A.) USP 2 803 121, Aug. 20, 1957. (2705)

FABRICS C 4

GLASS FIBER MAT FOR MOLDED PLASTIC STRUCTURES. W. H. Wise (to Bigelow-Sanford Carpet Co. Ltd). BP 768 841, Feb. 20, 1957. (2706)

IMPREGNATED CELLULOSE FELT. P. S. Hess (to Congoleum-Nairn Inc.). USP 2 801 937, Aug. 6, 1957. (2707)

Backing material for floor and wall covering composed of cellulose fibers impregnated with asphalt and a polymerized glycol.

NONWOVEN, POROUS SHEETS. H. R. Mighton (to E. I. du Pont de Nemours & Co.). USP 2 802 767, Aug. 13, 1957. (2708)

Nonwoven leather substitutes of increased water vapor permeability, flex life, tear strength, and tensile strength are prepared by hot-pressing a sheet consisting of polyamide fibers and a thermoplastic polymeric binder, swelling the fibers by soaking the sheet, and stretching.

TWO-PLY FABRIC. J. A. MacIntyre (to U. S. Plush Mills). USP 2 803 268, Aug. 20, 1957. (2709)

In this two-ply fabric (with the two plies tied together in weaving), the tying yarns have more elasticity than the warp and weft yarns. The fabric is inflatable for use as a cushion or mattress.

METHOD OF MAKING COMPRESSED ELASTOMER-BONDED HAIR PRODUCTS. E. W. Colt, S. N. Pinhasik and F. D. Sulc (to Armour & Co.). USP 2 803 577, Aug. 20, 1957. (2710)

FINISHING AND CHEMICAL PROCESSING D

CHEMICAL PROCESSES D 1

VIBRATIONS IN THE LIQUID TREATMENT OF WOVEN FABRICS. Orgryteverken AB. BP 749 042, May 16, 1956. Through BCIRA 37: 163 (1957). (2711)

Creating vibrations in the liquid through which fabric is passed in open width in a washing or dyeing process by means of a device consisting of sheet-metal plates, corrugated across the direction of the oscillations set up by a vibrator to which one end of a plate is fastened.

ROTPROOFING AND MILDEWPROOFING OF REGENERATED CELLULOSE FIBERS. Sandoz Ltd. BP 749 324, May 23, 1956. Through BCIRA 37: 167 (1957). (2712)

A rot- and mildewproofing agent consists of (1) a phenolic bactericide or fungicide (e.g. chloro-o-cyclohexylphenol) and (2) a product of the condensation of cyanamide or dicyandiamide with a polyethylene polyamine, or an alkyl derivative of such a product. This condensate has an affinity for cellulosic fibers and possibly forms a complex with the phenol. As a result, the proofed material withstands washing.

SAFETY DEVICE FOR SQUEEZE ROLLERS. H. Potter (to Bleachers' Assoc. Ltd). BP 749 325, May 23, 1956. Through BCIRA 37: 163 (1957). (2713)

Means for detecting the presence of minute projections (e.g. fragments of metal) on squeeze rollers or bowls. A feeler element (e.g. flexible doctor blade) bears against the roller and any vibrations are detected by electromagnetic or piezoelectric means (resembling a gramophone pick-up) and the impulses are amplified and converted into warning signals and/or control means. Circuit diagram.

HANDLING AND PROCESSING COILED MATERIAL. R. G. Russell (to Davy & United Engineering Co. Ltd). BP 749 501, May 30, 1956. Through BCIRA 37: 163 (1957). (2714)

Arrangement in which material coiled up on a set of spools mounted on a bank of arbors is taken, one spool at a time, through a process and coiled up on a corresponding empty spool on an output bank. The apparatus described is for rolling metal foil but it is claimed that the invention is applicable to textile dyeing, printing, and finishing.

WATER-REPELLENT PROCESS. Farbwerke Hoechst AG. BP 767 585, Feb. 6, 1957. Through BCIRA 37: 137 (1957). (2715)

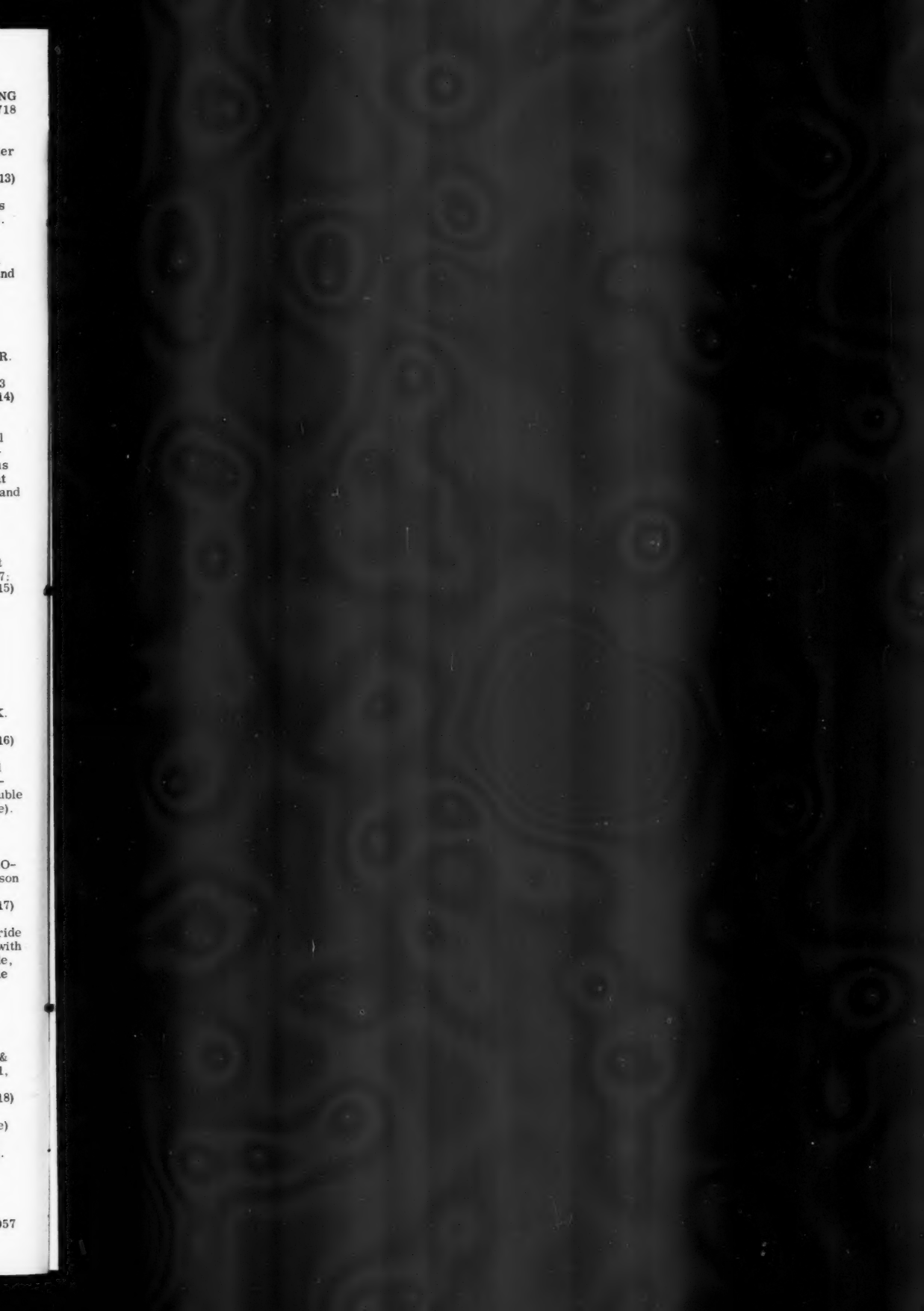
Fibrous materials, particularly outer garments after dry-cleaning, are treated with a solution in an inert organic solvent of a reaction product of an aluminum alcoholate (1 mol.) with a monobasic organic acid (0.2-2.5 mol.), and of a paraffin hydrocarbon.

BLEACHING PROTEIN FIBERS. D. R. Graham and K. W. Statham (to Wolsey Ltd). BP 767 744, Feb. 6, 1957. Through BCIRA 37: 135 (1957). (2716)

Yellow discoloration, e.g. of wool treated with optical bleaching agents when exposed to light, is largely suppressed by treatment of the material with a water-soluble sulfur-containing reducing agent (e.g. sodium bisulfite).

WATERPROOFING AND CREASEPROOFING CELLULOSIC TEXTILES. A. E. Henshall and J. R. F. Jackson (to Imperial Chem. Industries Ltd). BP 767 834, Feb. 6, 1957. Through BCIRA 37: 137 (1957). (2717)

When water-repellents such as stearato chromic chloride (USP 2 273 040, 2 356 161 and 2 524 803) are applied with precondensates of urea or melamine with formaldehyde, the treated textile need not be washed, no objectionable decomposition products being produced.

CHEMICAL MODIFICATION OF CELLULOSE. M. Doughty, B. J. Brown and B. Taylor (to Fothergill & Harvey (Research & Development) Ltd). BP 767 991, Feb. 13, 1957. Through BCIRA 37: 136 (1957). (2718)

Cellulose (e.g. viscose rayon cloth) is treated with a monoglycidyl ether (e.g. of 2, 7 dihydroxy naphthalene) leaving a phenyl, naphthyl, or naphthol group attached to the cellulose and available for further reaction (e.g. with a diazonium salt to produce a fast dyeing).